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Original Communications.

*THE TREATMENT OF PELVIC INFLAMMATORY CONDITIONS THROUGH VAGINAL INCISION.**

BY E. E. MONTGOMERY, M.D.,
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The route by which pelvic disease shall be attacked is a subject which, possibly more than any other, occupies the attention of the gynecological specialist. Of the routes commonly considered, the supra-pubic and the vaginal, the former has been the one usually followed, and by many it is still considered the more promising of the two. Its advantages, as asserted by its advocates, are that through such an incision the pelvic organs are exposed to sight and touch, the dissection can be made more complete, and greater security against accidents and hemorrhage obtained. Its disadvantages are: the longer, more painful convalescence, more radical procedure required to meet some indications, drainage against gravity, infection of sutures and consequent abdominal sinus, abdominal cicatrix, and possible ventral hernia.

The vaginal incision offers the following advantages: it permits the pelvis to be explored,

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pus-cavities in the broad ligament evacuated, tubal collections evacuated through the broad ligament without opening or soiling the peritoneal cavity; the uterus, ovaries and tubes may be removed where the disease is bilateral; drainage is from the most dependent portion of the pelvis; and the patient is spared the annoyance of an external incision with its sequelæ.

The truth lies between the two extremes; both procedures have their place, and each affords special advantages.

To better understand the purpose of the vaginal procedure, it will be well to consider briefly the conditions we are called upon to treat. Pelvic inflammation, in the great majority of cases, extends through the uterus to the tubes and ovaries. We should not forget, however, that it may also extend by the lymphatics and blood-vessels: pus collections of large size may occur in the cellular tissue of the pelvis without the presence of tubal disease. Tubal disease resulting in pus collection may form a large sac of the tube, which may rupture into the pelvis and become encysted, or into the broad ligament, forming a large mass; in either of which cases removal of the pus would be difficult without rupture and consequent soiling of the abdomen. In many cases these collections are not sterile, and their escape into the peritoneal cavity exposes the patient to the danger of general peritonitis. Few would assert the necessity for sacrificing the ovaries and tubes simply because they were situated near a pus collection. Nor does it seem wise that the peritoneal cavity should be soiled by a pus collection which can be emptied by an incision through the vagina.

As inflammation develops in the tube, unless it rapidly extends to its parietes and causes adhesions, the inflamed tube from its increased weight gravitates lower in the pelvis and is frequently found in Douglas's pouch, filling up the retro-uterine space. A large collection either posteriorly or laterally can readily be reached and evacuated through the vagina without breaking down the barriers nature has provided against the invasion of the general cavity. The tubal sac can be opened up, irrigated, packed with iodoform gauze, and thus obliterated. It is to be acknowledged that this is not a sure cure, that pockets of pus may remain unopened and the patient may have to undergo a subsequent operation; but the procedure enables us to remove the offending cause, permits the nutrition and general condition to be improved, and in many cases will result in cure, while the danger to the patient has been the minimum.

In acute inflammation of the pelvic cellular tissue, where serous and plastic exudate is extensive, vaginal incision and drainage affords an opportunity to anticipate suppuration and free the patient from its dangers, and remove the exudate before its organization, which would otherwise result in the hard, board-like floor that is so difficult to overcome.

Where the appendages of both sides are so destroyed by inflammation as to render their removal desirable or necessary for the future welfare of the patient, no one will deny that the uterus is an organ of but little prospective value; with the removal of the appendages its function is dissipated. But while it is thereafter a functionless organ, its retention does not fail to have an influence upon the future comfort of the individual. The cases are the exception where pelvic disease, whether in the tubes or cellular tissue, has not passed through the uterus.

Not unfrequently, tubal collections will be found extending into the uterine end of the tube, so that the retention of any portion of the tube means the retention of infected tissue, and endangers recovery. Even if the uterus be free from serious infection at the time of operation, it is usually enlarged, contains inflammatory exudate, and in the subsequent involution its increased connective tissue imprisons and compresses the nerve-filaments, producing hystero-neuroses which continue to render life uncomfortable after the removal of what seemed to be the pathological lesions.

Not infrequently patients, after the removal of both ovaries, continue to menstruate or have irregular hemorrhages and more or less profuse and offensive leucorrhea. The retained organ may subsequently become infected or be the seat of malignant disease. These various sequelæ have become so well recognized that some surgeons have resorted to the supra-vaginal amputation of the fundus in such cases as require the removal of both ovaries.

It is recognized that by this procedure the operation is cleaner and more effectively accomplished. But while the cervix thus left is probably the least offending portion of the uterus, it should not be forgotten that it is supplied with its own lymphatics and retains enough of glandular tissue to be a ready focus for reinfection. This is the portion of the

uterus most subject to malignant degeneration; it should therefore accompany the remainder of the organ when the greater part is exterminated. The vaginal incision affords a ready method for the extirpation of the uterus and its appendages.

While vaginal incision through the anterior fornix (anterior colpotomy) has been frequently done for removal of one appendage, and also for ventro-fixation, I do not believe it is so satisfactory as would be the abdominal incision. The form and extent of the vaginal incision will depend upon the situation and character of the disease. In all cases of drainage a free incision should be made. It is a mistake to make too small a puncture. The finger should enter and be used to break up adhesions and ascertain the presence of pus collections. All pockets which can be discovered should be opened, irrigated, and packed with gauze.

Any operation should be preceded by rigid asepsis, and effort should be made to render the vagina as nearly sterile as possible. The vulva and vagina should be scrubbed with a two-per-cent. solution of creolin, two ounces of tincture green soap having been added to each quart of the solution. This is most thoroughly accomplished by means of the fingers wrapped with gauze. The superfluous solution is removed by irrigation with sterile water, and the parts are then washed with alcohol.

The cervix is seized with a double tenaculum, and when the object is exploration or drainage an incision is made posterior to the uterus and broad ligament. If the mass is in the broad ligament, the latter may be torn through with finger and forceps, and the collection reached without opening the peritoneal cavity; no injury need be done to either artery or ureter. The operation may be expedited by an additional short incision near to the uterus on the affected side.

The pus-cavity is opened, irrigated (preferably with hot saline solution), and packed with iodoform gauze. The vulva is covered with sterile gauze, which should be frequently changed. The packing may remain for three or four days, dependent upon the condition. Its removal is followed by irrigation and repacking sufficient to keep the vaginal incision open.

The vaginal incision may be of service in exploring for collections in the pelvis, from rupture of tubal gestation, and formation of hematocele, or for pus and serous collections in the posterior cul-de-sac. Pryor has lately suggested incision through the posterior fornix in retro-displacement with extensive adhesions: the adhesions are broken up, the uterus, tubes and ovaries loosened, and the uterus tilted forward and kept in place by a mass of gauze behind it, while another in the vagina pushes back the cervix.

Uterine Castration. — The removal of the uterus and appendages, denominated uterine castration by Pean, is done for conditions which indicate the removal of both appendages. The operation is performed as follows: An incision is made around the cervix and extended laterally behind each broad ligament; the bladder is pushed off anteriorly until the peritoneum is reached and opened; the posterior cul-de-sac is then opened, when the uterine arteries on either side may be secured with ligature or forceps, and the cervix freed and amputated; the body of the uterus is then readily brought through the anterior opening, the ovaries and tubes rolled out, the remaining portion of the broad ligament secured, and the genital organs removed. Hemostasis may be accomplished by either ligature or forceps. The vagina is lightly plugged with gauze.

It is objected to this procedure that it is not thorough in cases of extensive adhesions, but it is not required to be. The uterus may be cut away, and if the tubes are very adherent and at all distended they may be broken open and packed with gauze and be permitted to become atrophied and obliterated.

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*THE USE OF COLD IN FEVERS.**

By H. A. Hare, M.D.,
Professor of Therapeutics in the Jefferson Medical College of Philadelphia.

Gentlemen: I bring before you to-day, as the first case, a patient suffering from the early stage of typhoid fever. You will notice from the chart which I hand to you that he has the characteristic evening rise and morning fall of temperature so constantly seen in typhoid fever, but by no means confined to this disease: you will remember that even the normal bodily temperature is slightly higher in the latter part of the day than in the morning. I have not brought this patient before you with the object of discussing the general treatment of cases of enteric fever,

*Clinical lecture delivered at the Hospital of the Jefferson Medical College.

but because I wish to give you my views as to the value and limitations of the application of cold for the reduction of abnormally high bodily temperatures, merely taking typhoid fever as a type of continued fever in which the temperature has to be controlled, in the majority of cases, either by medicinal measures or by the use of cold.

First let us consider the disadvantages which accrue from the use of so-called antipyretic drugs—remedies which, as you know, have until within a year or two been most popular with a large number of the profession in controlling febrile movement. Almost as early as their first introduction, original calorometrical experiments made by Professors Wood, Reichert, and myself, and a number of other investigators, proved beyond all doubt that the majority of the coal-tar antipyretics, if not every one of them, control fever by decreasing the production of heat in the body and also by increasing its dissipation or elimination of heat. Under such circumstances bodily temperature must speedily fall. Theoretically, therefore, these remedies would seem at first glance to be the very best we could employ in the treatment of fever; but a little thought will make clear to you that, while they accomplish the reduction of the temperature, they must at the same time produce two results which are quite opposite to those which we seek. In the first place they exercise a powerful influence over the circulation, the respiration, and the organs of elimination as represented by the kidneys and liver. Again, they exercise a more or less destructive influence upon the blood and its closely related organ the spleen, interfering to such an extent with the oxygen-carrying properties of the red blood-corpuscles that their use cannot but be associated with marked perversion of many of the normal functions of the body.

I do not wish you to think from what I have said, however, that I utterly condemn such remedies. On the other hand, I believe that our rule in the practice of medicine should be always to be moderate in our judgment as to the advantages and disadvantages of remedial measures, whether medicinal or otherwise. The occasions on which the antipyretics will prove of value are, however, very limited, and in the vast majority of cases the physician should encourage and employ the use of cold to the exclusion of these drugs.

Let me point out some of the reasons why cold is both theoretically and practically the true means of reducing febrile temperature occurring in the course of infectious diseases.

As you well know, the body puts into effect several processes by which it endeavors to protect itself from infectious disease when first attacked. Those who believe in the theory of what is known as phagocytosis, or that certain leucocytes in the body attack, ingest, and destroy germs of infectious diseases which gain entrance into the organism, also believe that antipyretic drugs in all probability exercise a deleterious influence upon the activity of these protecting phagocytes; in other words, these remedies to a certain extent render feeble one of the methods by which nature protects us from disease.

Secondly, fever is, no doubt, to a great extent a protective process; its development is an effort on the part of nature to protect us from the results of infection. There are a large number of experiments which point to the probability that high temperatures are not as favorable to the growth of many micro-organisms as the normal temperature, and there are many more to prove that any reduction of the bodily temperature below normal greatly increases the susceptibility of the individual to infection and its results. Again, it is a fact that the production of heat in our bodies is due to the oxidation of our tissues, and therefore fever means an increase in the oxidation processes. We also know that it is by means of oxidation that many vegetable poisons which are taken into our bodies are destroyed, and in all probability most of the animal poisons which are produced in the intestine or which are swallowed with the food are also destroyed in this way. In other words, the system by means of oxidation destroys the effete materials, just as a crematory does which is employed for incinerating refuse. If, therefore, the antipyretic drugs of the coal-tar class, of which I have spoken, diminish the manufacture of heat, they must also diminish the oxidation processes in the body—that is to say, the body is unable, when under their influence, to oxidize and discharge the poisons which are produced by the infecting micro-organisms.

Thus we learn that the use of these drugs prevents the body from protecting itself by destroying the poisons by phagocytosis and by fever with its associated processes. We also know that they prevent the liver and spleen from carrying out their ordinary func-

tional activity; that they depress the nervous system, and particularly the vaso-motor nervous system, rendering the patient more susceptible to cold and congestion; and finally, we have experimental evidence to prove that the administration of antipyrin and similar compounds renders animals more susceptible to infection by disease than if they had taken no drug.

These are, then, some of my chief reasons for thinking that antipyretic drugs are inadvisable. What reasons can I give you for strongly advocating the application of cold in the reduction of fever? They are briefly these:

First, none of the organs of the body are strained in the effort at eliminating foreign materials, nor are their functions perverted by the presence in them of powerful remedies. On the contrary, the proper application of cold, associated with active rubbing of the skin to bring the blood to the surface, improves the circulation all over the body, increases nervous and circulatory activity, produces an elasticity of the blood-vessels, which is destroyed by the use of drugs, and increases the action of the kidneys, the organs which eliminate from the body most of the impurities.

Naturally, you may think me inconsistent in stating that fever is a protective process and yet urging you to use cold for its reduction; and I confess that these statements must seem paradoxical, but in reality they are not so. There is a great difference between stopping oxidation processes by the use of drugs, and abstracting heat from the body by the use of cold. When cold is used, heat-production probably goes on with even greater rapidity, at least after a brief time. By the bathing the bodily temperature is prevented from rising to the point at which the fever would be dangerous in itself, while at the same time the poisons produced by the disease are more rapidly burned up by the increased rapidity of oxidation. In other words, the application of cold simply increases the draught and so burns up the refuse more rapidly than before.

These conclusions are not merely theoretical ones. Careful experiments by Liebermeister and other investigators in this line prove that in many instances leucocytosis is markedly increased by the use of cold, and it is a well known fact that by its use internal and external congestions are avoided which if they came on in full force would seriously imperil the patient's life.

Before closing I wish to emphasize one fact which, to my mind, is the most important of this lecture, namely, the manner in which the cold should be used in the reduction of fever. There are those who claim that fever, particularly typhoid fever, must always be reduced by actually placing the patient in the bath-tub, the water of which is at a temperature varying from 70° to 80°, or even lower; but it has always seemed to me that equally good and in all probability better results could be obtained if the use of cold were fitted to the case, just as the dose of digitalis or any other drug is fitted to the case. No one would think at the present day of asserting that every case of heart disease requiring digitalis as a cardiac tonic should receive exactly twenty drops of the tincture three times a day, but the common assertion would be that the dose of digitalis should vary with the necessities of the case. If, therefore, by means of careful sponging or the use of water, with friction, at a temperature of 85° or 90°, you can reduce a patient's temperature within a short time to 100° or 101°, surely this method is sufficient for the case. On the other hand, if colder water is required, it must be used, and the time of its application prolonged in direct proportion to the degree with which the fever resists treatment. And, finally, if repeated sponging with ice-water or with water at 60° or 70° fails to reduce the temperature, then it will be necessary to place the patient in a bath and perhaps to keep him there, rubbing him all the time until his fever is properly reduced. There is no such thing in medicine in connection with the use of drugs as recommending one definite dose for every case of any disease, and there is no such thing as a correct recommendation of one temperature or one method of the application of cold to every case of a given disease. To be successful practitioners, you must make your "punishment fit the crime," or, in other words, you must make your remedy and your dose fit your case just as the tailor makes a garment fit each man.

In conclusion let me say one word to you about the comparative value of antipyretic drugs and cold sponging or bathing in the treatment of non-infectious fevers, such as are represented by sunstroke. Clinical experience has proved that under these circumstances the antipyretic drugs possess little value, and that we must always rely chiefly upon cold bathing for the relief of patients suffering from thermic fever.

NOTES ON THE TREATMENT OF INTESTINAL INDIGESTION.

By Hugh S. Cumming, M.D.,
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All physicians have seen, and often vainly tried to cure, victims of intestinal indigestion.

The characteristic distress in the epigastrium or right hypochondrium, beginning several hours after the ingestion of food, and accompanied by distention of the intestines with gas; constipation; changes in the character of the urine; and other disagreeable symptoms, should make the diagnosis usually clear. These disturbances of the secretory apparatus are the symptoms we see in most cases, but more marked than these are the abnormal nervous phenomena, mental depression, irritable temper, sleeplessness, and headache. When a patient becomes the victim of intestinal indigestion, the whole disposition seems to change.

This distressing condition may be caused primarily by an abnormal condition of the digestive tract, as well as by imperfect mastication of food, due to haste in eating or to imperfect teeth; or it may be caused by deranged gastric digestion, for perfect intestinal digestion is dependent upon a properly prepared acid chyme, stimulating a normal liver to secrete normal bile, the resultant products being acted upon by normal pancreatic and intestinal juices.

In the treatment of these cases of intestinal indigestion, our first care should be, of course, to restore mouth and stomach functions; but even should the causes be primarily in the mouth or the stomach, the intestinal tract with its important organs is often so thrown out of gear that nature alone seems unable to repair the injuries.

In such cases, as well as in those primarily caused by an abnormal pancreatic juice, an artificial or natural substitute for the diastatic ferment of this juice has been long needed and sought for by the profession. Formerly, the effort was to get a ferment through the acid gastric juices into the alkaline intestinal secretions without destroying its power. This, however, is evidently a useless undertaking now, as we have found from careful clinical observation that taka-diastase gives perfectly satisfactory results in the treatment of such conditions.

In every case in which I have used taka-diastase, the result has been markedly good. I have been able to note a gradual gain in flesh and a rapid change in the general mental condition of the patient. I also give careful instructions with regard to dieting, insisting upon a variety of food, slow chewing, and avoidance of excess of any kind, with special caution with reference to acids and condiments.

I have welcomed the addition of taka-diastase to our list of modern remedies, for certainly no trouble is more common than intestinal indigestion, nor has any disease come under my observation which has been so troublesome to treat or so difficult to overcome.

CASES ILLUSTRATING THREE METHODS OF HYSTERECTOMY FOR DIFFERENT INDICATIONS.

By George Erety Shoemaker, M.D.,
Gynecologist to the Methodist Hospital, Philadelphia.

The methods of hysterectomy here illustrated are: (*a*) vaginal; (*b*) abdominal, by ligation with amputation of the cervix; (*c*) pan-hysterectomy by combining the vaginal and the abdominal routes. The indications illustrated are: first, epithelioma of cervix; second, bilateral destructive inflammation of tubes, with metritis; third, small, painful, bleeding fibroid. The cases narrated will illustrate ways in which the treatment of different conditions must be varied; in other words, the operation should suit the case, and the case should not be made to suit any special type of operation.

Case I: *Epithelioma of cervix; Vaginal hysterectomy; Recovery.*—Mrs. R. H., private patient, married, aged fifty-four; seven children, latest eleven years old; three miscarriages; menopause two and a half years ago at the age of fifty-one. The quantity of the monthly flow had gradually increased toward that time, the duration being from five to twenty-one days. After complete cessation for more than two years, a slight irritating bloody discharge without odor was noticed; also pelvic distress, but no sharp pain. No bladder symptoms. I saw her three months after the discharge began.

Examination: Perineum torn partly through sphincter; cervix torn on right side; no eversion, no cystic degeneration. Near the os a denuded area showed three small hard red nodules which bled readily on being touched. The posterior lip showed hardening and infiltration as from malignant disease; the os was slightly excavated, the walls of the canal

of an angry red color. A thin band of slightly hardened tissue extended out down and back from the angle of the tear on the left side, which may have been cicatricial after an old cellulitis following the laceration, and was apparently not the hard infiltration of malignant disease. The rectal and vaginal walls were otherwise normal. The uterus, of normal dimensions, was retroverted and freely movable. No secondary involvement could be anywhere demonstrated. Diagnosis, early epithelioma. Advice, vaginal hysterectomy.

After complete sterilization of the neighborhood under ether, the uterus was curetted, the diseased area burned with the Paquelin cautery, and iodoform gauze packed into the canal. The cervix being held by a tenaculum, Douglas's pouch was opened, and gauze attached to a ligature pushed in to keep back the intestine. The incision being carried right and left nearly to the vessels, a running catgut suture caught up the vaginal and peritoneal edges to control bleeding from small veins. The bladder being pushed off by the finger and knife-handle from the front of the uterus, the broad ligaments were tied off with silk and a blunt needle. The ovaries, tubes and uterus came away together, as shown in the specimen. As the omentum tended to slip into the vagina, two loose catgut sutures drew together the upper edges of that canal. Iodoform gauze in the vagina and a vulvar sterilized pad completed the dressing.

At the end of the operation the pulse was 86 and regular, though the patient had well marked mitral disease. The highest pulse during convalescence was 96, and, as seen by the chart exhibited, the highest temperature was 100.4°. The patient was throughout bright and more comfortable than would seem possible to one not familiar with the average rapid convalescence after hysterectomy by the vagina for cancer.

This case is presented as a type of those in which vaginal hysterectomy is chiefly indicated, in the writer's opinion. The operation is suitable in cases of cancer where the vagina is capacious, and where the uterus has not become greatly enlarged and can be readily drawn down. When the disease has advanced so as to invade the broad ligaments, when glands out of reach are involved, or when it is necessary to work through diseased tissue, I decline to do the operation, as I consider it harmful to the patient. In old virgins the small, tense and atrophied vagina adds greatly to the difficulty, so that the supra-pubic route may be better. For the ordinary pelvic abscess, having its origin in the tubes or ovaries, the operation of vaginal hysterectomy recently advocated by some operators does not appear to the writer to be the best for the future of the patient. The immediate mortality is doubtless low, but the vagina is, like the rectum, a poor place into which to establish an infected sinus if one ever hopes to have that sinus close permanently from the bottom. The well established principles of the surgery of the ages are not changed by a passing fashion.

CASE II: *Hysterectomy by the supra-pubic route, leaving the cervix; Double pyosalpinx, metritis, old pelvic peritonitis, morphine habit; Recovery.*—The method followed in this case —supra-pubic ligation, amputating and leaving the cervix—is that which is adopted as the method of choice in nearly all cases, *i. e.* for fibroid, septic inflammation, and all other indications except malignant disease in the cervix or endometrium. Leaving the cervix preserves better the normal anatomical disposition of the vaginal vault and pelvic floor; but when malignant disease is present, of course, no uterine tissue can be allowed to remain.

Mrs. I. P., twenty-six years old; hospital case, from a mountainous region. Father died of heart disease, an aunt of cancer. Patient never strong. Menses first at sixteen; quantity always great, every four weeks, lasting seven to nine days, with pain throughout. Had a fall on the ice at the age of fifteen, acute pelvic inflammation following and confining her to bed three weeks. Three children; three miscarriages. Present disabling symptoms date from last miscarriage, three months ago, when she had peritonitis, being in bed five weeks. Since then has bled freely at two periods, the last continuing a month, seven to eight wet napkins a day, with much pain in left side, and inability to walk from pain and soreness in lower abdomen. During this time the morphine habit was acquired, thirteen "powders" of unknown strength being taken daily. This fact, however, was concealed, as was also the free use of whiskey, until after the operation.

Examination showed a large, tender uterus, firmly adherent in retroversion; much general tenderness; double disease of appendages; exudate from pelvic peritonitis; perineum lacerated; free purulent discharge from endometrium.

Hysterectomy was done through an abdominal incision; both tubes and ovaries

were removed still attached to the body of the uterus, as seen in the specimen presented. All the organs were buried in adherent coils of intestine. After these were separated it was seen that the fimbriated ends of the tubes had become closed, the uterine ends presenting the hard, contorted, cordlike form found in infective salpingitis, the hardened and sacculated ampullar ends apparently containing pus. Although these tubes have been largely stripped of adhesions and unfolded, one may yet see how nature works to prevent the escape of tube contents into the peritoneal cavity. First the fimbriæ adhere and form a solid mass; they are closed in by a swelling of the outer wall of the tube extending over the end and gradually contracting at the orifice until the fimbriæ are buried and the end of the tube is smooth and bulblike. Meanwhile the contorted turns of the tube adhere, the outer end often being drawn underneath. This end will then lie buried in tube convolutions, broad ligament, adherent intestine, and exudate, one to two inches from the general peritoneal cavity. The uterine wall in this specimen is doubled in thickness from inflammation and subinvolution.

Hysterectomy was done because the uterus would always have remained sore, large, and displaced, a source of discomfort and discharge from endometritis.

The patient made an excellent recovery, the abdomen remaining flat or scaphoid, but the morphine habit gave trouble. As stated, this habit was not known, and in consequence no morphine was given after the operation, as it would otherwise have been, to maintain her normal state. The night after operation she demanded morphine, threatening to "get hysterics" if it were not given; being refused, she proceeded to get them, screaming like a wild animal almost incessantly for five hours, throwing herself about the bed, requiring restraint to keep her in it. She beat her head with a basin, and repeatedly went into a position of opisthotonos, with dilated pupils and other signs of hysteria. Meanwhile the pulse was greatly disturbed, though the temperature remained unchanged. Probably the integrity of ligatures was never so sorely tested after hysterectomy, but they stood the test. The patient having begged piteously for her hand-bag, it was examined and found to contain morphine and whiskey. She now confessed to the morphine habit, and was given a quarter of a grain hypodermically every four hours There was no further trouble except a slight outbreak of hysteria on the following night. The morphine was gradually cut down, and stopped by the end of the third week. The patient herself, being free from all pain, requested its discontinuance some time before it was thought wise to entirely give it up.

This case furnishes one instance in which it was thought wise to remove the uterus in addition to the appendages. It is not the writer's custom to do this in every inflammatory case. He has had a number of cases of removal of both tubes and ovaries for destructive inflammation where the uterus was not seriously diseased; complete restoration to health has continued after several years. In cases, however, where the pelvic floor is relaxed, where the uterus is in consequence displaced, or where, especially in gonorrheal cases, there is marked inflammation of the uterine tissues or subinvolution, it seems wise to remove the uterus also; considering it as a muscular mass deprived of function, without subjective influence on the mind or character, useless after the destruction of the appendages by inflammation, and a source of distress from its displacement. It is customary to obtain permission from the patient to use the necessary judgment after the abdomen is opened, and this judgment is exercised in favor of leaving the uterus in place where the condition of the patient would make further procedure risky, or where the uterus itself is well supported, small, and comparatively healthy.

CASE III: *Pan-hysterectomy by the combined vaginal and abdominal routes for small, painful, bleeding fibroids; Recovery.*—Mrs. H., aged forty-eight; a private case from the interior of this State. One child nineteen years ago. Menses regular, one to three days, every five to six weeks, and not excessive up to ten months ago, when she began to bleed freely and continued to do so without any cessation for five months. Pain, which had previously been irregular, became constant at the same time, being most severe in the left side of the abdomen, and passing through both hips. Exacerbations of pain, apparently originating about the neck of the bladder, were of great severity, causing nausea and sweating. Vesical and rectal tenesmus was associated with these attacks. She had gradually acquired a morphine habit and was now taking one-fourth of a grain a day.

Examination showed a torn perineum, with relaxation of the vaginal walls, especially the posterior. The uterus was 4½ inches in length, retroverted into the hollow of the

sacrum, not adherent, and in the first stage of prolapse. A sessile fibroid knob, about one inch in diameter, sprang forward from the uterine wall, within the area of the bladder attachment, a little to the left of the median line. This knob consequently made pressure upon the bladder-wall. The ureteral catheter when introduced showed that the left ureter was displaced by this knob, passing upward and then outward over its base in the sulcus at the junction of the knob with the uterus. There was much tenderness at this point, and there seemed no doubt that traction upon the ureter was an element in the bladder distress. The problem was, to find the surest and safest way of curing the patient of her bleeding and pain, as well as of the bearing down and general pelvic distress due to the laceration, and consequent retroversion and descent of the uterus. Perineal repair alone would have failed to cure the retroversion and descent of a large, heavy uterus; to have suspended the uterus in addition would have solved the problem of uterine support, but would have involved opening the abdomen. Here was a woman aged forty-eight with a fibroid, small as it was, causing five months' constant bleeding, the pain driving her to morphine. Experience has shown that the menopause gives very uncertain relief in such cases, even after it comes. Electricity checks bleeding but temporarily. It was decided that, since operation was necessary in any event to cure the tear and displacement, to do less than a hysterectomy would be unjustifiable temporizing; the prospect of cure offsetting the slightly increased risk. Indeed, the patient herself preferred death to a continuance of her suffering.

The operation of total hysterectomy from above in a patient as stout as was this one is often a matter of some difficulty when the region of the cervix is reached. Consequently the removal was begun by the usual early steps of a vaginal hysterectomy. The uterus did not come down well, and, owing to the peculiar relations of the ureter above the fibroid nodule, the operation was completed from above through an abdominal incision, by ligating off the broad ligaments and dissecting down the bladder in front. As shown in the specimen presented, the ovaries, tubes and uterus were removed entire. Gauze was passed into the vagina from above, and the peritoneum closed over it and over the broad-ligament stumps, the abdominal wound being closed without drainage.

During the after-treatment the patient's accustomed quantity of morphine was daily given until convalescence was well established, when it was gradually diminished and finally stopped. This is a most important point in the management of operations on opium *habitués*. The drug must on no account be withdrawn at the time of operation, but enough must be given to keep the system at its normal level. Even then they are dangerous subjects for major operations. Surgically the recovery was uneventful, the highest temperature being the absorption rise to 100.4° on the second day, as shown by the accompanying chart. The wounds were absolutely aseptic and healed primarily. She returned to her home free from pain, and taking no morphine. She will, of course, have no more bleeding.

As in all opium cases, the mental condition required careful management, hyoscine and potassium bromide being the drugs relied upon to secure quiet. Such patients require careful nursing, being subject to hallucinations, very crafty and untrustworthy, and liable to get out of bed.

Total hysterectomy by a combined vaginal and supra pubic method is seldom called for, but it may be done where, as in this instance, the patient is quite fat, and where neither the vaginal nor the abdominal route alone gives proper access to the parts.

3727 CHESTNUT STREET.

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*SOME NOTES ON AN EPIDEMIC OF CHICKEN-POX IN THE ORTHOPEDIC WARD OF THE HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA, SERVICE OF PROF. DE FOREST WILLARD.**

BY JAMES J. WALSH, A.M., M.D.

Chicken-pox is usually said to be a trivial disease, gaining any importance it has medically from its superficial resemblance to smallpox. Observation of a series of cases among the children in the Orthopedic ward showed that in patients with lowered vitality (many of the cases were being treated for tuberculous arthritis) it was not so trivial an affection as the text-books indicate. Most of the clinical data usually given for the differential diagnosis of the disease from smallpox proved

* These notes form an appendix to "Some Notes on Practical Orthopedics," to which was awarded the Orthopedic prize at the University of Pennsylvania Commencement, June, 1895. The writer has to thank Prof. De Forest Willard for permission to publish them.

in these severer cases to be absolutely at fault. This forms at once the reason and the excuse for calling attention to them.

The first case that occurred was in a little girl of six, a delicate child with tuberculous history on the paternal side and a personal story of recurrent phlyctenular conjunctivitis, who was being treated for anchylosed hip and knee, due to tuberculous arthritis. The attack looked for a time very like smallpox. The temperature, after but slight prodromal symptoms, rose rapidly to 104°. This called attention to her, and an examination disclosed a number of distinctly shot-like papules, with an occasional vesicle, on her breast and back. The infiltration of the corium that gives this shot-like feel is said not to occur in chicken-pox. In fact, it is said that these "shot-like papules" are pathognomonic of smallpox. Whittaker* says that neither macules or papules are to be found at all in varicella.

In at least one of the cases, macules were noted at the very beginning of the indisposition, and in two other cases papules were noted. It seems probable that macules and papules, in severer cases at least, would be nearly always found to precede the vesicles if attention were called to the case early enough. The lesions run such a rapid course, however, through their various stages, with the highest temperature occurring usually at the time of vesiculation or a little after, that in private practice the preliminary stages can be seldom seen.

The vesicles in this case were many of them large and surrounded by a distinct inflammatory areola, though this is given as one of the differential diagnostic marks of smallpox by nearly all the authorities. Three other cases also had these infiltrated areolæ.

The American Text-book of Children's Diseases says that in chicken-pox "the vesicles never are umbilicated or partitioned, and never become pustules." In two of the cases there was distinct umbilication, and an attempt to evacuate the vesicles with a sterile needle revealed the existence of partitions from the failure to empty after puncture. In both of these cases pustulation of nearly all the vesicles occurred. This may have been due, to a certain extent, to picking at them by the children, as Dr. Nevins Hyde† suggests, but in both these cases pustulation was so general that it seemed rather a stage of the disease.

In these cases there was even noted a secondary rise of temperature, a little above 100° and lasting but twenty-four hours. This might be expected, for the secondary fever in smallpox is not due directly to the infection itself, but to the absorption of toxins from the multiple minute abscesses that exist after the pustular stage is reached. In cases of varicella like those under consideration the pustulation of the vesicles produces a very similar condition, and a corresponding rise of temperature would usually result.

The formation of pus leads almost necessarily to some destruction of tissue. The papillæ of the corium suffer just as in smallpox, and the result is the whitish, somewhat pearly, depressed cicatrix that is not unlike the "pock mark." Several of the cases showed these after convalescence, two of them presenting not a few on shoulders, chest, and abdomen. Of these cicatrices Osler* says: "After chicken-pox they are not so very uncommon. They are in my experience more common than after varioloid."

In one of our cases the lesions were plentiful on the face, which is unusual; and besides were distinctly confluent, which is more unusual. Of this case Professor Willard said that had it really been a case of smallpox it would have been a very serious one. At no time, however, did the child suffer from much constitutional disturbance, as would have been the case in the graver disease, but, with a temperature above 102°, played with toys and pictures on the bed and joked with the other children in the ward. This was true in all the cases except for a few hours at the very height of the fever.

Whittaker† says that the disease is exclusively confined to children under twelve, but a girl of fifteen in the ward with the others also developed the disease, and not in a very mild form. Dr. Willard stated that at sixteen he had himself suffered from a severe attack.

To look back on it, one might hesitate—so many points of external similarity were there to smallpox—as to our having been deceived in the disease, as Hebra is said to have been in the famous case which has led the Vienna school into holding against the rest of the medical world the essential identity of the two diseases varicella and variola. We had, however, some of the typical milder cases with scarcely any fever, slight indisposition,

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*Pepper's Text-book of Medicine, art. "Varicella."
†Pepper's System of Medicine, art. "Varicella."

*Practice.
†*Loc cit.*

and a few clear vesicles, looking as if "scalding water had been flirted over the surface," with serous contents so translucent that it was easy to see the reason for the Italian name *cristalli*, "crystals."

To review for a moment: The usual external signs given as differentially diagnostic between smallpox and chicken-pox seem to be valueless. It is only the severer cases of chicken-pox that lead one to hesitate, and in these there may be high fever (104°), a macular and papular rash, the papules having a shot-like feel; the vesicles may be surrounded by an inflammatory areola, may be confluent, be umbilicated and partitioned, later they may become pustules with the production of some secondary fever, and finally may leave permanent depressed cicatrices not unlike "pock marks." The disease may even attack young people of fifteen or older, so that age alone does not exclude the milder affection.

The really diagnostic signs of chicken-pox that can be depended on are: the absence of any serious constitutional disturbance—even with high fever the patient is very little indisposed, and not for any length of time; the absence of prodromal symptoms such as pains in the back, though even these may occur in milder form; the existence of cutaneous lesions in a particular part of the body in different stages at the same time, papules, vesicles and pustules being found together; the more rapid course, so that, instead of taking three days, papules take but twenty-four hours to become vesicles, and about the same length of time to pass from the vesicular into the pustular form; and finally, the location of the rash, chicken-pox seldom or never appearing first on the fingers and wrists, though it may be localized on the face alone (as in one of our cases), while smallpox usually appears first on the forehead, the wrists, and the fingers.

As to *treatment*, the text-books generally seem to consider the disease as so trivial as not to require treatment. To say this is to invite neglect of it and pave the way for complications and sequelæ. Despite the assertion in the Text-book of Children's Diseases that "it has neither complications nor sequelæ," it is liable to both. One of our cases, the worst, developed hemorrhagic lesions—of but limited extent, however—on the legs; and in tuberculous children not a few cases of gangrenous varicella have been reported. A number of our cases remained weak and anemic for a considerable time after convalescence had been thoroughly established, though systematic stimulation and tonic treatment were instituted immediately after complete defervescence.

Then any disease in which the fever almost normally rises to 103°, and sometimes goes even higher, must not be neglected. Increased metabolism at this temperature causes much greater tissue waste than usual, and sends to the kidneys for excretion a much larger amount of effete material. If the overworked kidneys are under such circumstances called upon in addition to excrete the infectious material of that undoubted but as yet unexplained form of infection "a cold," their lowered vitality will fail to protect them, and a nephritis will result. A number of cases of nephritis after varicella have been reported, and doubtless some of the cases of Bright's disease that develop in later life without any immediate cause and without scarlatina in their histories have a neglected attack of chicken-pox as one of their etiological factors.

A child will require almost as much care and treatment in many cases of chicken-pox as in any other of the infectious diseases of childhood. Antipyretic treatment will sometimes be needed, and the fever should always be watched carefully and at least the ordinary fever mixtures prescribed. Kidney secretion should be stimulated, and nephritis carefully guarded against. The effervescent solution of citrate of magnesia is readily taken by children, acts kindly on the kidneys, bowels, and skin, and is an excellent febrifuge.

As to the eruption, it seems too bad to allow any more disfigurement to follow than is absolutely unavoidable; usually there are some lesions on the face, and nearly always on the neck and shoulders, and in female children especially it is important to limit the cicatrices as much as possible.

Two indications are to be met here: limit the action of the pyogenic micro-organisms, and alleviate the itching to keep the child from further infecting the lesions by scratching. Carbolic acid will meet both indications—used either, as Whittaker suggests, by touching each of the vesicles with a solution of equal parts of glycerin and carbolic acid, or, what seems perhaps better, the frequent use of a wash containing five per cent. of carbolic acid, or the application, where possible, of lint soaked in this solution over the lesions when pustulation begins.

When the crusts over the lesions have formed, the application of five-per-cent. car-

bolized vaselin will probably aid in preventing further dissemination of the infection; for while it has not been absolutely proven as yet that the infectious material is present in the cutaneous lesions, it is at least extremely probable, from analogy with the other infectious fevers, that it is.

As a matter of prophylaxis, even older children, up to sixteen or seventeen years of age, who have not had the disease, should not be allowed to associate with those affected.

A CASE OF CORROSIVE-SUBLIMATE POISONING DURING LABOR.

By Henry L. Williams, M.D.,
Service of Dr. B. C. Hirst, Howard Hospital, Philadelphia.

On January 12 of this year, Mrs. W., a healthy, robust primipara, twenty-eight years of age, was received into one of the rooms of the Howard Hospital as a private patient of Dr. B. C. Hirst, to await her confinement. From data furnished by the patient it was estimated that delivery was due on January 10.

On the 25th of the month, as no signs of beginning labor were apparent, and the child was already two weeks over-due, it was decided to induce labor. A flexible French bougie was accordingly introduced into the uterus, and a large wool tampon placed in the vagina soon after noon.

The first labor pains began at about 6 o'clock in the evening, and an examination showed the child presenting R. O. P. with all the conditions entirely normal.

Later in the evening Dr. Hirst was summoned to attend an important complicated labor outside the hospital, and the conduct of the case was left in charge of the writer, his resident physician.

Severe active pains began soon after midnight, and at 1 o'clock the os was fully dilated, though the head had not yet engaged.

In addition to the resident and special nurse in charge of the case, the mother of the patient was also allowed to be present in the room and ministered to her daughter's minor wants, giving her drinks of water from time to time.

Toward 3 o'clock in the morning the child's head had become fully engaged and had begun the descent of the pelvic canal.

The patient repeatedly called for a drink, and, as the water in the pitcher was somewhat warm, it was suggested to the nurse to bring a bottle of Apollinaris from the refrigerator, which stood just out in the hallway. At the same time a bowl of fresh bichloride solution was called for, and the nurse left the room. After a few moments the nurse returned, bringing a bottle of bichloride, and then again left the room. The mother was sitting at the head of the bed, while I was reclining upon a lounge by the window, during one of the intervals between the pains. I was soon slightly aroused by a movement of the mother, and took notice that she was raising her daughter's head in the act of giving her a drink. I thought nothing of this; saw the woman take the glass and begin to drink. This, however, instantly stopped, and the patient spat out and gagged violently. Getting up immediately and going to the bed, the first thing noticed was a bottle of the strong solution of bichloride of mercury, of which one teaspoonful to a pint of water made a solution 1 to 1000, standing upon the washstand with the cork out. The bottle was plainly labeled in red letters three-quarters of an inch high, "Poison!" Scarcely thinking it possible, I asked the mother if she had given her daughter anything out of the bottle. Her reply, as she pointed to the corrosive sublimate, "Why, yes, I gave her a drink of Apollinaris," revealed the entire situation. The patient had been given a solution to drink, each fluidrachm of which contained 7½ grains of the corrosive chloride of mercury.

Almost at once the woman vomited, evacuating more than a pint of liquid. Undoubtedly, but for the fact that the stomach was well filled with fluid at the time, and its contents almost immediately emptied, nothing could have saved her life.

According to the patient's statement, she had taken two rapid swallows before she perceived that what she was drinking was not the proper thing. In order to arrive at as near an estimate as possible of the amount actually taken, several of the hospital nurses have since been asked to drink two swallows of water in a natural manner, and the amount has then been carefully measured. It was found that slightly more than a fluidounce was invariably taken at each swallow. Admitting, as the patient said, that two swallows had been taken, this would mean two ounces of the solution, and as each fluidrachm contained 7½ grains, the entire amount taken would be represented approximately by 120 grains of bichloride.

The nurse was instantly despatched for eggs, and within three minutes from the time

when the liquid had been swallowed, the patient had been made to take the whites of a half-dozen of them. There was again nausea, and after a few moments the eggs were evacuated with considerable white coagulum. The stomach was next washed out with a gallon of warm sterile water by the siphon-tube, and during the twenty minutes following the woman was induced to drink the whites of a dozen more eggs.

During this period there was more or less continuous nausea. A hypodermic of twenty minims of digitalis and one-twentieth of a grain of strychnine was also given. At this time the pulse was counted, and found to be 148 to the minute and rather weak. The extremities were cold and damp, so hot bottles were applied.

For the first ten minutes after taking the solution, powerful intermittent uterine contractions continued without interruption. Pains then gradually lessened, and for half an hour ceased entirely. A vaginal examination soon after showed the head of the child not quite upon the pelvic floor.

At the end of half an hour, pains began gradually to be renewed, and from this time until delivery shortly after 8 o'clock in the morning, there was constant, though extremely slow, progress.

As the child's head emerged from the vulva, the cord was seen to be tightly drawn about the neck and to pass under the axilla, where it was constricted. The child was immediately extracted, but all efforts to overcome the asphyxia were unavailing.

Had the forceps been used several hours earlier, it is possible that the child's life might have been saved; but as the woman was a primipara, and as there was constant progress, except during the half-hour when all pains ceased, and nothing to indicate the condition — for no fetal heart-sounds had been heard at any time—there seemed no sufficient reason to interfere with the process of nature.

It is unlikely that the bichloride had any effect on the child, except as it interfered with the process of labor.

During the morning all symptoms of sublimate poisoning passed away. The patient complained of a very sore throat, and of difficulty in swallowing, but there were no gastro-intestinal symptoms or further complications. Rather extensive ulcers were formed on the tonsils and uvula, and the entire pharynx was greatly inflamed for about a week. At the end of this period the inflammation subsided, and gradually all traces of the trouble disappeared.

A note received from the patient in May stated that she had experienced no further symptoms or discomfort after leaving the hospital.

For a week following the accident, the patient was given three-grain powders of bismuth subnitrate every two hours during the day, and the throat was sprayed frequently with Seiler's solution.

Soft diet was kept up for two weeks, and at the end of this time all treatment discontinued.

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*THE DANGER OF TUBERCULAR INFECTION FROM COW'S MILK, AND ITS PREVENTION.**

By B. H. Detwiler, M.D.,
Williamsport, Pa.

"In 1782 the City of Naples enforced sanitary laws with the intention of stamping out tuberculosis. They required the registration of all consumptives, also inventories of clothing, some of which was destroyed, with disinfection and replastering of houses." These methods were based on empirical grounds, yet in the next half-century tuberculosis was reduced fully fifty per cent. One hundred years later Robert Koch presented a complete demonstration of the cause of this dread disease: he demonstrated that a particular bacterium, the *Bacillus tuberculosis*, was the cause, and that the sputa of consumptives gave rise to more than fifty per cent. of the cases.

Many of you will recall the case of Mr. E., who had his shop on West Fourth street, a quarter of a century ago. He was a hale, sound man, but had in his employ the Robinson brothers, who worked in a small closed room and expectorated around the stove. Mr. E. justly claimed that his subsequent infection with tuberculosis was due to that cause, which is now accepted.

It is only within recent years that the profession has come to regard milk as an important item in the etiology of this disease. Sternberg says: "A more common mode of infection, especially in children, is probably by way of intestinal glands from ingestion of milk of tuberculous cows." Infection from this source has been proved, and the bacilli found in the milk by such careful experimenters as Bollinger in Germany, and Dr.

*Read before the Lycoming County Medical Society, July 7, 1896.

Ernst in Boston. This revelation of bacilli of tuberculosis in the milk of cows is of recent date. Formerly, when the disease was considered purely hereditary, it was a visitation of God. Now, since we can demonstrate that one source of danger is in tuberculous cows, it is self-evident that this source of contagion should be stamped out by destroying those cows that the tuberculin test shows are contaminated.

Dr. Shakspeare, of Philadelphia, states that "Fully one-fifth of all the deaths of infants and children feeding on ordinary milk are due to tuberculosis, commencing in some part of the digestive tract." This may be a high percentage. Dr. Hamaker, of Meadville, Pa., states that since the tuberculous cows have been eliminated from the herds supplying that city with milk, there is less disturbance of digestion of the children than formerly; with a population of 12,000 last season there were only two deaths from cholera infantum. The question will present itself: If milk from cows is dangerous, how is it that we have used it with impunity for years? The reply will be that it may not have been so innocuous as we have imagined. Only the sputum of consumptives reproduces this disease, and the milk of consumptive cows is dangerous only when the udder becomes involved, but one diseased cow will infect a whole herd. While tuberculosis is infectious, it is only mildly so. It is not like measles or whooping-cough, yet it is infectious.

In the wards at the Hospital for Insane at Danville, Pa., all tuberculous inmates are kept together, and there have been only a few deaths from tuberculosis in that institution in comparison with institutions where it is not considered infectious.

Formerly California was the only hope of consumptives. Its equable climate and freedom from bacillary infection made it for years the Mecca for this class of sufferers. The same results were secured at Denver and El Paso; but this same dry climate and the high winds disseminated the bacillus of tuberculosis expectorated by the consumptive upon the street and wherever convenient, until there is now as great mortality there as at other places.

The plan that appears to me most feasible in the light of our present knowledge is, to destroy all tuberculous cows and instruct all tuberculous people that they must not expectorate on the streets or cars or in any place where the sputa may be incorporated in the floating dust by evaporation and inhaled.

The two points of most frequent accidental invasion are the lungs and throat. Those who have diseased tonsils should have them removed—a painless operation. The inflamed crypts of the tonsils afford a nidus for arrest and propagation of the bacilli, and the inhalation of these bacilli into lungs debilitated by heredity may be similarly dangerous; or an acute bronchitis in infancy or youth may produce a bronchial engorgement that will afford an excellent point of invasion for these micro-organisms or spores; and when this invasion is established, the end is at hand. I desire to submit communications from Drs. McLain and Hamaker which present exhaustively the method of exterminating bovine tuberculosis. Dr. McLain writes:

In reply to your communication asking my opinion as to the use of tuberculin as a means of diagnosis, and its results, and the method of dairy and milk inspection of our City Board of Health, would say after a thorough test and from a large experience I am satisfied that the judicious use of tuberculin is the best and surest method to eradicate tuberculosis from the bovine race, providing the same methods for extinction could be adopted in the human race, but so long as we have tuberculosis in one family, just so long will we have it in the other. The percentage in cattle will be greatly decreased, but we must have more legislation and aid from cattle-breeders to enable the veterinarian to accomplish what the profession could do under more favorable circumstances. I think there has been needless destruction of valuable breeding animals in which the tubercular lesion was encysted and practically without danger. I have seen cases where the process of calcification had occurred, but the pathological changes and the different organs invaded by the bacilli render them so dangerous to have about, that it is better to destroy a few that are not dangerous than to allow one to escape. I have never had any serious results following the use of tuberculin. I think the greatest danger of infection is when there are tubercular deposits in the udder. In regard to the method of dairy and milk inspection of our Board of Health: It is a plan suggested by myself that every vendor must have a license, and, in order to obtain the same, must make application to the milk-inspector for a certificate of inspection. This inspection consists of an examination of all cattle, food, water, and dairy utensils. There must be a separate milk house, independent of dwelling or stable, and nothing but clean cattle are allowed to be milked. The milk is tested from time to time, to see that it is kept up to standard—3⅛ per cent. butter fats, 12½ per cent. solids. I send you this day rules and regulations of our Board. Please look over the milk rules, etc. Yours, etc.,

C. COURTNEY MCLEAN.

Meadville, Pa., June 29, 1896.

MEADVILLE, Pa., June 29, 1896.

DR. B. H. DETWILER, *Williamsport, Pa.:*

DEAR DOCTOR: Complying with your request, I wish to say that we have had quite an energetic health board in Meadville, who have tried to bring the health department of our city up to modern standard. They have paid especial attention to the purity of the milk supplied to our people, requiring all milkmen and small dealers to register their cows or herds with the health department,

and an inspection made by our milk-inspector, who is a very competent veterinarian.

During the past few years this officer has discovered quite a number of tubercular cattle and caused them to be killed. He uses tuberculin in diagnosing his cases, but has not yet used the test on all the cows, but simply on those which have shown some symptoms of the disease.

The milk-inspector also requires the milkmen to have clean, well ventilated stables for their cattle, and also requires that the milk be properly cared for over night.

A couple of years ago our milkmen began to use a milk-preservative, which they put in the milk to keep it from spoiling, in order that they might discontinue the delivery of milk twice a day. The health board compelled the discontinuance of this practice, which was very injurious, especially to small children.

Personally, I am in favor of any means by which tuberculosis can be stamped out of the herds. I recall reading a very interesting case two or three years ago that occurred in Colonel Beecher's family. An infant son died of tubercular meningitis. The herd of three cows showed no evidence of tuberculosis, but on the physician's insisting that tuberculin be tried, two cows were found tubercular, as was proved by the post-mortem.

With kind regards, I am,

Yours truly,

W. D. HAMAKER.

A recent *Lancet* editorial presents the case as follows:

"TUBERCULOSIS OF THE BONES, MUSCLES, AND EYES OF CATTLE.

"In the inspection of the carcasses of animals destined for the food of mankind, something more is necessary for the detection of tuberculosis than a cursory examination of the lungs and lymph glands, as the lesions are sometimes observed in the hard tissues and muscles, which are not usually cut into for investigation. In a German periodical devoted to the hygiene of flesh and milk the remark is made as to the comparative infrequency of tubercles in the flesh of cattle, and especially in the myocardium. In the latter situation only one instance had been observed until recently; this was in a cow which had very extensive tuberculosis of the pleura, and in the wall of the right ventricle there was a tuberculous mass as large as a bean. Not long ago at the Leipzig abattoir a calf six weeks old and in good condition was slaughtered, and on dressing the carcass it was found to be affected with generalized tuberculosis — the lungs, pleura, and lymphatic glands of the neck, chest, and abdomen, as well as the liver, spleen, kidneys, etc., being involved. On the right side of the heart, near the surface, and only separated from each other by a thin muscular partition, were two masses of tubercle, each as large as a hazelnut. One was imbedded in the wall at the left ventricle, near the auriculo-ventricular groove, and the other at the apex of the organ, on the middle of its anterior surface. Another veterinary abattoir inspector had some time before discovered a case in which there was tuberculosis of the sternum, the elbow-joint, and the pectoral muscles. More recently he has met with another instance of muscular tuberculosis, which was apparently not primary, but consecutive to tuberculosis of the cartilage of the seventh rib. The latter was completely destroyed at certain points, the remaining portions containing yellow, rounded, cup-shaped nodules, which when removed left circular cavities that neither in color nor appearance could be distinguished from normal cartilage. Around the diseased cartilage there were seven small abscesses, one of which was open; the pus in these contained the tubercle bacillus. The cow was the subject of thoracic and abdominal tuberculosis. There are a number of cases of ocular tuberculosis in the ox recorded in veterinary literature, and among the latest are two described by Herr Winter of Bromberg. The first case was that of a four-year-old Dutch cow, which was so stupid or stupefied as to be insensible to the voice and to blows. At its necropsy generalized tuberculosis was noted, the pleura, lungs, peritoneum, lymphatic glands, liver, kidneys, ovaries, and udder, as well as the brain and its coverings, being diseased. The cornea of the right eye was opaque, bluish-gray in some places and bluish-black in others. Near the internal angle there was a prominent mass formed of lenticular tubercles, and the sclerotic also showed pyriform and lenticular projections that appeared to come from the interior of the eye. At the junction of the cornea with the sclerotic there was another mass of the diameter of a 50-centime piece. The interior of the ocular globe was fully occupied by a caseous mass, bright yellow in color, semi-fluid, and containing calcareous particles. At the papilla of the optic nerve the retina was separated from its deeper layer by cheesy tubercles; the prominences seen on the outside of the sclerotic were found to be situated between that and the choroid coat, and were calcified in some places and puriform in others. The crystalline lens could not be recognized, and the iris was confounded with the cornea. By the aid of the microscope, tubercle bacilli were found everywhere. The other case was that of an emaciated cow also affected with generalized tuberculosis. The right cornea was turbid and of a dark-blue tint; at the margin of the sclerotic there were

several yellowish tubercles each about the size of a lentil; the vitreous humor was muddy and opaque, but the retina and crystalline lens were normal. The posterior surface of the iris was partially adherent to the lens by a thin white layer, and on its anterior surface there were nodules which could be seen through the cornea, with yellow miliary tubercles grouped in tufts or in grape-like masses at its lower border where it joined the cornea. In all these neo-formations the tubercle bacilli abounded."

The statements of Drs. Hamaker and McLain, who are specialists in this line of work, are of great value, and the fact that with the better and carefully prepared milk in a city of 12,000 people there should be only two deaths from cholera infantum speaks louder than words.

Dr. Ernst, the bacteriologist of Harvard, who prepared an exhaustive report for the Massachusetts Society for Promoting Agriculture, in 1894, states:

"The desire of the committee was to determine whether or not the milk derived from tuberculous cows might contain the infectious material of the disease, and in this way become dangerous when used as an article of food, and this question was of necessity to be divided into two parts: first, whether this infection of the milk existed in cases in which there was actual tuberculous disease of the udder; and second, whether it might exist in cases in which the udder was apparently or actually healthy, the disease existing in other parts of the body. In regard to the first part of the question, plain common sense showed that the danger of infection was a real one, and besides there existed at the time sufficient experimental data to prove the fact, so that there was very little dispute that under such circumstances milk should not be used for food, certainly not in an uncooked condition." Evidence since then in the same direction has constantly accumulated, and now there are few to challenge the opinion that milk from cows with tuberculous udders should be condemned as food. Upon the second point, however, as to whether the milk from cows with tuberculosis, but not of the udder, might be dangerous, there was a great diversity of opinion, and almost no experimental evidence upon which to base what opinion there was. Work was prosecuted under the following headings: first, a careful and persistent microscopic examination of the milk from such cattle; second, inoculation experiments with such milk; third, experiments in feeding with the same milk. "After two years of continuous and methodical examinations of milk from cattle at the experimental farm at Mattapan, of the Bacteriological Laboratory of Harvard, the following conclusions were reached, thirty-six cows having been examined and 121 examinations of milk and cream made. Each examination was made from the bottom and top fluid. In every case at least a dozen cover-glasses were used for each examination, and fifteen minutes' time was spent over each cover-glass. The staining employed was invariably 'Koch-Ehrlich, 24-hour method.' The bacilli of tuberculosis were found in one or more of the cover-glasses upon nineteen different occasions. These nineteen positive results were obtained from twelve different animals, and were found in about equal proportion in the milk and cream. The bacilli were actually seen in the milk of one-third of the animals. These conclusions were confirmed in twenty out of thirty-six animals by careful post-mortem examination. The inoculation experiments were made upon guinea-pigs and rabbits. In six weeks eighty-eight guinea-pigs were inoculated with milk and cream from fifteen different cows, twelve of which were tuberculous. Of ninety rabbits inoculated, six exhibited tuberculosis. Forty-eight rabbits were fed from thirty to ninety days with milk of tuberculous cows with healthy udders; two were infected with tuberculosis. After being similarly treated, twelve healthy pigs showed fifty per cent. of tuberculosis; and of twenty-one calves, eight, or over thirty-three per cent., showed tuberculosis. In twenty-three cows of the twenty-five used for experimental purposes, not one had any tuberculosis of the udder. One had one giant cell with one bacillus. In all there were evidences of tuberculosis in other parts of the body. Of these cows, nineteen had calves, which were killed when six days old without any evidence of tuberculosis, showing absence of hereditary infection."

The summary of the reports states that in the practice of thirty-nine veterinarians, representing nineteen States, for one year, there were 549 cases of tuberculosis, with 242 suspicious cases—total, 791. Among 165 herds, containing about 3000 animals, eighteen per cent. were diseased and over eight per cent. suspicious—total, twenty-six per cent.

The following conclusions are drawn:

"1. While the transmission of tuberculosis

by milk is probably not the most important means by which the disease is propagated, it is something to be guarded against most carefully.

"2. The possibility of milk from tuberculous udders containing the infectious elements is undeniable.

"3. With the evidence here presented, it is equally undeniable that milk from diseased cows with no appreciable lesion of the udder may, and not infrequently does, contain the bacillus of the disease.

"4. Therefore, all such milk should be condemned as food."

These deductions are legitimate, and should (with the evidence of disease as represented by this article) lead us to examine with great care all milk products; and it should be the duty of the health officer to see that no milk is offered in this city that has not its proportion of butter fat and solids and that is not free from all agents that tend to prevent fermentation, and that the herds are free from tuberculosis and are properly fed and protected from the inclement weather, with abundance of sunlight and air. Further, a county veterinarian should be appointed by the City Board of Health, with proper salary, whose duty should be to visit each herd in the county twice a year or oftener, and test each cow with tuberculin when in his opinion it is necessary after the first initial test. This protection of milk-supervision should extend to neighboring counties, from whence our milk-supply is largely secured, and at the expense of the producers.

With these protective measures carried out in the spirit of the law, and with proper influence exerted upon our law-makers that legislation be made for the protection of farmers and dairymen by properly remunerating them for the loss of their fine cattle (which are peculiarly liable) and assisting all who will be pecuniary sufferers in stamping out this branch of this dread disease, in time consumption will be classed with the effete diseases, like smallpox and diphtheria.

FECAL IMPACTION IN THE ANO-RECTAL SPACE.

MANLEY (*Medical Brief*) concludes an article on this subject as follows:

To summarize, it may be stated:

1. In all cases of rectal inertia, resulting either from a low grade of inflammation or ulceration occupying any site of the large bowel, tubercular, specific, or malignant, attended with persistent constipation, the perfunctory administration of an enema or cathartic is inadequate, and nothing less than a painstaking physical examination will reveal the real condition.

2. In many males past middle life, in whom we have reason to suspect inhibition of the sensory reflexes of the rectum from local lesion in the neural periphery or in the spinal or central ganglia, particularly when vesical symptoms are present, with obstructed or forced urination, before directing any special therapy to the genito-urinary organs we should be entirely assured by a digital examination that there are no fecal concretions lodged in the lower rectum.

3. A relaxed, partially prolapsed uterus may roll over and interfere with complete defecation, giving rise to symptoms of fecal obstruction; and *per contra*, a rectal bag of hard, dehydrated or calcified fecal mass may, in turn, give rise to nearly every symptom of ovarian, tubular, or uterine disease. A thorough exploration of the rectum as a primary measure is of prime importance in all such cases.

OSTEOPLASTIC RESECTION OF THE TARSUS.

NEGRETTO (*Gaz. degli Osped.*, No. 8, 1896) describes a new operation applicable in cases where the disease is confined to the posterior part of the foot, and where it is desired to save as much of the foot as possible. The operations of Vladimirow and Mikulicz for this purpose result in the foot being fixed in a position of talipes equinus. The author's operation allows the patient to walk on the sole of the foot, which is fixed at right-angles to the leg. This result is brought about by resecting portions of bone from the tibia and fibula and from the dorsal face of the navicular, cuboid, and second and third cuneiform bones, the two surfaces (after previous removal of the diseased os calcis and astragalus) being then united together. The foot is necessarily shortened by this method, but the author claims that less mutilation occurs, tenotomy of the flexor tendons of the sole of the foot is unnecessary, the operation is shorter and more conservative, and, above all, the foot is so placed that, instead of walking on the toes, as after Mikulicz's operation, the patient is able to use the sole of the foot as before. In the single case in which the author has put his method into practice the results were decidedly satisfactory.—*British Medical Journal*, April 4, 1896.

The Therapeutic Gazette

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Leading Articles.

THE TREATMENT OF PNEUMONIA IN CHILDREN.

In the Progress columns of this issue of the GAZETTE will be found an excellent summary of the various methods employed in the treatment of this disease in childhood in Philadelphia, Washington, New York, and Boston. It may not be amiss for us to point out in addition the methods which we have found to be useful under such circumstances. The hygienic surroundings of the child and the temperature of the air of the room, as well as the question of feeding, need not be considered in this editorial.

There can be no doubt that in many cases of croupous pneumonia in childhood the tendency of the disease from the beginning to the end is to run a practically harmless course which almost invariably ends in cure, so that the child only needs medication when symptoms of sufficient importance arise to require relief. A little stimulation at times when the heart seems somewhat feeble and the nervous system is depressed, and a careful and continuous use of concentrated and easily digested food, are all the measures which have to be resorted to in the average case.

Catarrhal pneumonia, being a much more frequent disease in children, and one which possesses a far greater mortality—in part due to the fact that it generally complicates some other malady—usually requires much more interference on the part of the medical attendant.

The fever, which in both these diseases may become excessive, is best relieved, in our opinion, by the use of cool drinks and by tepid or cool sponging; but the actual bath treatment of the fever we have never known to be required and would regard as being too dangerous and too severe for this class of patients. Neither do we think the employment of cardiac or nervous sedatives is very advisable in this class of patients, unless signs of marked nervous excitement are present, when pure nervous sedatives such as the bromides are much to be preferred to those drugs (such as aconite and its relations) which not only quiet the nervous system but also depress the circulation. In these children, who, as we have already said, are generally somewhat exhausted by an earlier illness, alcohol has seemed to us to be by far the best stimulant, in the form of good brandy in the dose of from ten drops to a teaspoonful, according to the age of the child and the response made by the circulatory system to the stimulant. We believe the brandy should always be given diluted with water, and, if the child is old enough, mixed with a little finely cracked ice, as in this way the fever is reduced and the child does not spurn its food, fearing that its taste has been spoiled by the introduction of the brandy which to it is a disagreeable medicine. Four-hour intervals should usually elapse between the doses of brandy, although if active stimulation is required the liquor may be given every two hours for the first twenty-four or forty-eight hours of the disease. Simultaneously with the use of brandy by the mouth we believe that in both forms of pneumonia the employment of quinine by the rectum is of the greatest value, and we give by preference either the hydrobromate or the hydrochlorate of quinine in the form of a suppository; this medication should not be repeated more frequently than three times in the twenty-four hours, and two, three or four grains of quinine may be placed in each suppository. The more frequent use of suppositories is liable to produce rectal irritation and expulsion of

the suppository before sufficient time has elapsed for the absorption of the drug.

In regard to the use of cotton or woolen jackets or of poultices in cases of either croupous or catarrhal pneumonia in childhood, we can state that we have never been able to see that they were of any advantage; on the contrary they have aided in maintaining a febrile temperature by interfering with the dissipation of heat from the child's body, and have increased its nervous irritability by making it uncomfortable. Indeed, in some instances, the profuse sweating thus induced has, we believe, weakened the child and increased its susceptibility to cold. Should there be much irritable cough which disturbs the patient's rest, small quantities of bromide of sodium, rather than bromide of potassium, are employed, and the bronchitis tent is resorted to, or at least steam from a kettle of boiling water is allowed to permeate the air of the room. Should any tendency to collapse come on, we believe that belladonna or atropine should be given by hypodermic injection, or by the mouth, according to the severity of the symptoms.

In conclusion we wish to emphasize a point already referred to, namely, the absolute necessity of maintaining from the beginning to the end of the attack a definite plan by which nourishment in an easily digested form is provided for the child. More depends upon the maintenance of its strength, and therefore upon the preservation of its digestion, than many physicians seem to think; and in addition to leaving written orders for the nurse as to the manner in which medicines are to be employed, the physician should give careful directions as to the means by which the food is to be prepared and the frequency and quantity in which it is to be administered. Care should also be taken to keep the kidneys acting freely by the use of some simple pure diuretic water, to which may be added several times a day a few drops of sweet spirit of nitre.

THE VALUE OF ALCOHOL AS A DRUG.

In the midst of the absolutely contradictory statements which one finds in the medical journals and text-books concerning the action of drugs, it is sometimes difficult for the physician to know what to believe or what course of therapeutics to follow; for on the one hand we may be told by an eminent authority that a certain remedy is useless in all the forms of a certain disease, while another, equally eminent, regards it as his sheet-anchor in the same disease. We believe there is one universal rule which should guide the general practitioner in his administration of remedies the efficiency of which is disputed, and this rule is to pursue a medium course in his methods of treatment, recognizing the fact that both those who are strenuously opposed to the remedy and those who are excessive in its praise represent extremes, midway between which safety lies for most of us.

Not only are new remedies but recently introduced to the profession subjected to these contradictory discussions, but remedies which have been before the profession for many years are every now and then violently attacked and equally ably defended by members of the profession who have conceived certain ideas concerning them. One would have thought that, in view of all the years during which alcohol has been used as a remedy, the profession had at last some definite idea of its value in the treatment of disease; and yet within the last few months there has been a very considerable amount of literature contributed to medical journals both for and against its administration. Thus, in the *Journal of the American Medical Association* of September 28, 1895, and in subsequent numbers, there appeared a series of articles, some of which were in favor of this drug, while others condemned it utterly. We are there told by Dr. Crothers that experience proves that the effect of alcohol upon the tissues of the body is in every way deteriorating; that it benumbs the nerves and interferes with the coördinating powers of the brain. Again, Dr. Quimby informs us that it has been clearly demonstrated that alcohol neither aids digestion, prevents disease, nor prolongs life, and he even goes so far as to state that alcohol has a great affinity for water and when introduced into the system interferes with the normal action of the red corpuscles and robs the blood of its due proportion of oxygen. Again, in the same number Dr. Grosvenor gives us a large amount of information designed to show the evil influences of alcohol, and in a series of sub-headings in his article readily shows the position which he holds. One of these headings is, "Alcohol is the Enemy of the Home;" another is, "Alcohol is Inimical to the Good Order of Society;" another, "The Widespread Use of Alcoholic Beverages in a Nation is a Menace to its Integrity and Life," and with similar sub-head-

ings an onslaught is made upon alcohol which, if it were an unknown drug, would condemn it in the minds of many persons who are apt to be carried away by enthusiastic condemnation or praise.

It is very far from the intention of this editorial to convince the readers of the THERAPEUTIC GAZETTE that alcohol is a harmless drug, or that they should cast it aside as being one which can never do good. Until the millennium comes, there will always be some persons who will claim that no good can come out of the use of alcohol, and there will be others who will shockingly abuse its employment both as a medicament and as a drug taken for pleasurable purposes. The fact, however, that it is abused by those who do not understand its action, that it is taken to excess by those who develop the alcoholic habit, and that it is under these circumstances capable of exercising a deleterious influence both morally and physically, does not in the slightest degree prove that its wise employment is not in many instances followed by beneficent and most useful results. Undoubtedly there are instances in which the use of alcohol is a mistake, and equally undoubtedly there are instances in which its administration is of the greatest possible practical value. In some instances it is true that other drugs, incapable of producing a habit, can be employed for the purposes of stimulation, and in many of these instances such a substitution is wise; but, on the other hand, we should not deprive our patients of a valuable remedy, if it is suited to their case, because of any theoretical or fanatical attacks upon it.

The trained physician knows only too well the deleterious influences of this drug when abused, and he also appreciates its extreme usefulness when employed in a proper manner. Universal condemnation of a remedy seldom brings the result which the writer desires; for practical experience, in demonstrating that the absolute condemnation is incorrect, is apt to carry the demonstrator to the other extreme and give him distrust of the evidence which has been presented to him.

The literature of medicine and the enormous accumulation of experience in regard to this remedy will never permit it to be shelved; and, on the other hand, those persons who are enthusiastic in exposing its injurious effects when abused will never allow us to lose sight of the fact that its effects may be evil as well as good. A little less dogmatic denunciation of alcohol on the one hand, and a little more wisdom in its use on the other, are the ends to which we should direct our efforts.

THE USE OF CROTON CHLORAL IN PAINFUL AFFECTIONS OF THE FACE.

It will be remembered by many physicians that chloral hydrate was introduced into medicine many years ago by Professor Liebreich, of Berlin, whose attention was first attracted to the remedy with the idea that on entering the body it would be broken up into chloroform and formic acid and so produce a surgical anesthesia equivalent to that caused by the inhalation of chloroform itself; and he also believed that the remedy for this reason would be useful for the relief of pain. As a matter of fact we all know that chloral in ordinary doses, and in most individuals, simply acts as a powerful hypnotic, causing sleep by some influence (which we do not understand) upon the intellectual portion of the cerebral cortex, and that it is not a remedy for insomnia due to pain, but rather for insomnia due to nervous disorder. It is true that eminent obstetricians, such as Playfair, have recommended its administration in massive doses for the relief of the pains of labor, but their example has not been followed by a large number of the profession, and chloral remains to-day a remedy for sleeplessness but not a remedy for pain.

On the other hand, croton chloral, or the butyl chloral hydras of the British Pharmacopœia, which is very closely allied to ordinary chloral hydrate, possesses far more analgesic power and is also much less depressing to the heart and respiration than chloral itself. For this reason it is to be employed in preference to chloral in all instances where insomnia is due to pain; and it seems to possess a particular affinity for the fifth cranial nerve, quieting it when neuralgia affects it. Curiously enough, however, in another form of pain with which the fifth nerve is connected, namely, that called toothache, croton chloral seems to possess absolutely no power in ordinary doses; but in *tic douloureux*, and other forms of pure nervous pain, its administration in the dose of three to five grains in pill every two hours until the pain is relieved or sleep comes on is to be recommended.

In other instances it may be given, as is chloral, in solution with syrup of acacia and water, or with water and glycerin, or with

some syrup of lettuce in water. As large doses as sixty grains have been employed, but twenty to thirty grains should be the maximum dose in most cases.

THE POSSIBILITY OF DISINFECTING THE SKIN OF AN OPERATIVE REGION.

To the already extensive literature bearing upon this subject, Lauenstein (*Archiv für Klinische Chirurgie*, bd. 53, heft 1) contributes the results of prolonged and apparently carefully conducted bacteriological and clinical research, and though these throw no specially new light upon the subject they emphasize certain facts which are sometimes ignored or forgotten by the busy surgeon.

In the first place the author demonstrates the fact that the *Staphylococcus pyogenes albus* is the microbe most frequently found in and on the skin, not only in Europeans, but practically in natives of all nations. The laboratory research was conducted by implanting in nutrient material portions of skin snipped off with sterile scissors. The method of disinfection followed was a very thorough one.

A certain number of patients were first taken, to whom simply a hot bath had been given; only twenty-five per cent. of these failed to give cultures. The next series represented those whose skin had been locally once thoroughly disinfected; thirty-six per cent. of these gave no cultures. The final series represented those whose skin had been repeatedly disinfected; considerably more than half of these failed to give cultures.

It is interesting to note, in considering the value of this work, that out of three experiments with inflamed and fistulous skin, one failed to give any culture, although no cleansing had been practiced, while after disinfection of similar inflamed areas two out of seventeen cases failed to give cultures. In fifteen instances skin was taken both from disinfected inflamed areas and from areas which had not been previously treated; in only three instances was the result of disinfection apparent; in one case the grafts from both regions proved sterile.

After the *Staphylococcus albus*, the *S. aureus* follows in frequency of appearance.

The author quotes Rutherford, who out of thirty-eight examinations of disinfected surfaces obtained apparently clean skin in only twelve. This author used carbolic acid, permanganate of potassium, oxalic acid, benzin, alcohol, ether, glycerin, and bichloride—surely a sufficiently formidable list.

The same author showed that a drop of the corrosive chloride solution with which the skin is bathed, if placed in the nutrient material with the excised piece, does not inhibit growth; indeed, he added corrosive chloride to bouillon in the proportion of 1 to 5000 and found that on this mixture germs would develop vigorously. Similar results were obtained on bouillon to which had been added carbolic solution.

From these experiments, and from many others conducted on similar lines but perhaps in some cases more carefully, or at least more accurately reported, it seems plain that by present methods the surgeon cannot hope to disinfect the skin thoroughly. That this end, however, is very much more likely to be attained after repeated disinfections, with the application of wet antiseptics in the interval, than it is by one thorough cleansing, seems clear. It is evident, then, that, no matter how thorough and how long-continued the disinfection has been, infection may start from the skin and under favoring circumstances reach the underlying parts and seriously complicate wound-healing.

Hence it follows that stitches which include the whole depth of a wound are unsafe, since infection may follow their course. The deeper parts of the wound should be closed by buried sutures; and the skin stitches should be either percutaneous, thus avoiding the ducts of the sebaceous glands in which the germs are particularly apt to be found, or should include only the skin, and should be made of some smooth, non-absorbing substance, such as silver wire or Chinese silkworm-gut, in preference to catgut, which by swelling and becoming gelatinous affords an admirable medium for the propagation and diffusion of the germs. The impossibility of skin-disinfection also constitutes a strong reason for omitting drainage whenever this is possible, and for keeping the skin surface surrounding the wound dry.

Reports on Therapeutic Progress

SOME CONSIDERATIONS IN REGARD TO THE ADMINISTRATION OF ARSENIC.

VINAY, in *Lyon Médical*, April 12, 1896, points out that arsenic may be given by the stomach, subcutaneously, or by the rectum. The gastric mode of entrance, the one most commonly resorted to for the administration

of full doses, very frequently produces burning in the epigastrium and loss of appetite. Nevertheless in many cases of pernicious anemia and pseudo-leukemia these full doses are necessary. By the hypodermic method these symptoms are avoided, but it is necessary to avoid local accidents by the most careful antisepsis. It is well to use Fowler's solution diluted with a little cherry-laurel water, but it must not be forgotten that such an injection is very apt to produce a good deal of local irritation as well as much pain. Probably it is better to use a solution of arseniate of sodium. For rectal injection the following mixture may be employed:

℞ Fowler's solution, 1 drachm;
Distilled water, 2 ounces.

One drachm of this may be injected into the rectum night and morning, and after four days' treatment it can be given three times a day, namely, morning, noon, and night. If the medication is not pushed too forcibly and frequently, it does not produce rectal tenesmus.

THE TREATMENT OF GASTRIC ULCER COMPLICATED BY NEURALGIA.

The *Journal de Médecine de Paris* of April 5, 1896, gives the following directions: Absolute rest and abstinence from food, the patient remaining in bed continuously. A small piece of ice may now and again be placed in the mouth if absolutely necessary, and over the stomach a small ice-compress will exercise a good influence. If the hemorrhage progresses, it is well to inject into the anterior abdominal wall over the stomach the following prescription:

℞ Filtered fluid extract of ergot, 15 minims;
Distilled water, 1 drachm;
Carbolic acid, 1 minim.

The nourishment must be given by rectum. The following may be employed:

℞ Milk, 4 ounces;
Yolk of egg, 2;
Salt, a spoonful;
Red wine, a teaspoonful;
Starch, 15 grains.

Warm, and give three injections a day, after a water clyster has been given to cleanse the bowel.

To combat the pain, it is well to administer from half a grain to a grain of codeine; and for the purpose of moving the bowels, which naturally become constipated, injections of hot soap and water, glycerin, olive oil or castor oil are to be employed. For the first four to seven days after the hemorrhage the patient must rest in bed in the dorsal position, and when food is first taken it must consist of milk with a little coffee, beef-tea, bouillon, and the yolk of an egg stirred up with Vichy water or some alkaline liquid. No cocoa, chocolate or wine must be taken. For several weeks after the hemorrhage a very light diet should be taken, and small quantities of Carlsbad water or Carlsbad salts should be used to keep the bowels open. Hot applications should also be made to the skin, with the object of bringing the blood to the surface.

THE TREATMENT OF CHRONIC NASO-PHARYNGITIS.

The *Journal des Praticiens* of April 11, 1896, recommends the following plan of treatment:

First, the mucous membrane of the nose should be washed by means of the following prescription:

℞ Bicarbonate of sodium,
Biborate of sodium,
Chlorate of sodium, of each, 1 grain;
White sugar, 36 grains.

To be dissolved in a half-glass of hot water.

In other instances the following antiseptic solution may be employed:

℞ Alpha-naphthol, 45 grains;
Alcohol, 10 ounces.

A teaspoonful of this solution to be added to a quart of hot water which has been boiled.

In other instances, irrigations with boric acid or salicylate of sodium are of value. Sometimes irrigations with the following application are useful:

℞ Liquid vaselin, 4 drachms;
Salol,
Resorcin,
Salicylate of bismuth, of each, 1-20 grain.

THE TREATMENT OF GONORRHEAL RHEUMATISM.

The *Journal des Praticiens* of April 11, 1896, points out that true rheumatism often resists the salicylate of sodium, and still more frequently is gonorrheal rheumatism unaffected by this drug. The treatment which is recommended by BALZER may be grouped under the headings of prophylactic, internal, local, and surgical. Under the head of prophylactic treatment, it goes without saying that every means should be exhausted for the purpose of shortening the attack of gonorrhea. Nor should it be forgotten that the attack may apparently be aborted and yet be active enough to cause joint-symp-

toms. So far as internal treatment is concerned, large doses of from forty-five to sixty grains of salicylate of sodium combined with some one of the balsams are useful. In the chronic cases iodide of potassium often does good. The local treatment consists in immobilization of the limb, the application of ice-bags upon the painful part, and the application of soothing ointments which also possess a resolvent influence. The following may be used:

℞ Salicylic acid,
Oil of turpentine,
Lanolin, of each, 2½ drachms;
Lard, 3 ounces.

In other instances an ointment containing guaiacol in the proportion of one drachm to the ounce may be employed. In chronic cases we should use counter-irritation, massage, electricity, and turpentine baths, and recommend that the patient resort to some hot springs. Should there be considerable effusion into the joint, compression may be used for its absorption, or if the effusion becomes purulent it should be carefully aspirated, and by means of the same needle sixty to ninety minims of a 1:4000 solution of corrosive sublimate should be injected. Should the articular inflammation become exceedingly severe, an arthrotomy is indicated.

ALBUMINURIA AND UREMIA FOLLOWING THE APPLICATION OF BLISTERS.

In the *Revue de Thérapeutique Médico-Chirurgical* of April 1, 1896, HUCHARD calls attention to the fact that blistering in Germany and Austria long since fell into desuetude, owing largely to the fact of its abuse. There are also cases on record in France, as well, in which the application of blisters to persons who were suffering from advanced kidney disease produced the disagreeable symptoms mentioned in the title of this article.

Thus, in one case a young girl of eighteen years was admitted to the Necker Hospital with symptoms of gastric disturbance and constipation; there was also severe abdominal pain, gastralgic in character. On the day of admission an examination of the urine showed an inconstant quantity of albumin, but as the pain in the abdomen persisted a blister six by eight centimeters in dimensions was applied for ten hours. Five days afterward it was found that the face of the patient was puffy and that there was a condition of marked albuminuria with severe lumbar pain. Under the use of an exclusive milk diet she did not improve: there were disturbance of vision and persistent headache, nocturnal restlessness, intense dyspnea, and great acceleration of the respiratory rhythm; also nausea, vomiting, convulsions, and absolute amaurosis. Finally anuria became complete, but first the urine was found to contain enormous quantities of albumin. Ten days after the beginning of these serious symptoms improvement began: the edema disappeared from the extremities, but persisted in the face; the urine was more abundant, contained less albumin, and there was also a diminution in the dyspnea; the pulse, however, was exceedingly slow, only 44 per minute. Ten days later the patient seemed to have made a complete recovery, the albumin having disappeared from the urine.

From this case and from others which are mentioned, we are warned that care should be taken in applying blisters over considerable areas to patients who suffer from any insufficiency of the kidneys.

THE VALUE OF RESPIRATORY GYMNASTICS IN MAINTAINING THE INTEGRITY OF THE LUNGS AND AS AN AID IN TREATMENT.

In the *Boston Medical and Surgical Journal* of May 28, 1896, OTIS writes in a very practical manner on this topic. He tells us that the general exercises which are good for increasing the respiratory power are very numerous. Walking, however, he does not consider a very valuable one. "A person who only works and walks," as a recent writer on bicycle exercise says, "hardly ever fills his lungs." There are swimming, tennis, rowing, bicycling, skating, golf, running, jumping, hand-ball, mountain-climbing, going up stairs, the *cure de terrains* of Oertel, dancing, singing, reading aloud, free-hand classwork in the gymnasium, and rope-jumping. Rope-jumping is a common form of exercise with those training for boxing, to increase the "wind." All exercises which bring the legs into violent action are especially good for the respiration, on account of the number and size of the muscles employed. Then there are the direct or local respiratory exercises—those especially devised for training and developing the respiratory muscles and lungs. Now these direct lung exercises are applicable not only to the well, but to those who, from pulmonary lesion or general bodily weakness, are unable to undergo the more active general

exercises; for they increase the efficiency of respiration without increasing the need of respiration, creating the "thirst for air." Of course, all exercise is interdicted to those suffering from acute inflammation, the febrile state, or serious hemorrhage.

These especial pulmonary exercises are simple and yet efficacious: Standing erect in a well ventilated room, or wherever there is pure air, with the hands on the hips, and taking long, deep inspirations and slow expirations, beginning at the bottom of the chest and filling up, so to speak. This, alone, done several times a day, will often materially increase the lung capacity, as the writer has frequently verified. "Numerous observations," says Lagrange, "prove that voluntarily taking a certain number of deep breaths every day is sufficient to produce in a short time an increase in the circumference of the chest, which may amount to two or three centimeters."

In these breathing exercises the rhythm can be varied according to the following schedule:

1. Slow and long inspiration and expiration.
2. Inspiration and expiration long and quick.
3. Slow and long inspiration, and long and quick expiration.
4. Long and quick inspiration, and slow and long expiration.
5. Short inspiration and long expiration.
6. Long inspiration and short expiration.
7. Short inspiration and expiration.
8. Inspiration by two or three stages or jerks, and expiration long.
9. Inspiration long and expiration by stages or jerks.
10. Inspiration and expiration by stages or jerks.

In all these exercises one should breathe through the nose only.

Then there are the various arm movements with their modifications, in connection with the deep breathing:

Slowly raising the arms to a horizontal position and then over the head until the hands meet, slowly and deeply inspiring while performing the movements, and expiring while lowering the arms; thus the supplementary respiratory muscles of the chest and shoulders are brought into action.

Raising the arms and then carrying them back and down, describing a movement of circumduction.

Standing erect and straightening up, and finally rising upon one's toes, deeply inspiring during this movement.

Extending the arms in a horizontal position, and carrying one of the legs back so as to offer a large base of support to the body.

Lying on the back horizontally upon the floor or a table, and raising the arms backward and over the head while inspiring; if lying upon a narrow table, the arms can describe a circle about the head.

The exercises with wands or bar-bells, which demand rather more exertion perhaps than the free-hand movements.

In the Swedish system of gymnastics there is almost an innumerable variety of respiratory exercises, most of which, however, are but modifications and combinations of a few simple movements, and most of them can be performed without apparatus. Then there are the gymnastic devices and apparatus for increasing the lung capacity and developing the respiratory muscles; the so-called "chest-developers" and "lung-expanders;" the "chest-weights" and "quarter-circle;" the high parallel bars and traveling rings; and the heaving movements of the Swedish gymnastics, which are usually exercises of hanging and climbing by means of rings, bars, ladders, and poles.

Renzi describes the following apparatus for prompting deep respiration, which he makes use of with beneficial results in his clinics as well as in his private practice: To two hooks in the wall are attached cords, and to these a cross-bar much like a flying trapeze; the height of the bar is adjusted to the height of the patient. This cross-bar is seized by the patient with outstretched arms, who leans forward, forming a curve with his body, the two points of support being the hands on the bar and the toes on the floor. In this position of the body the patient is forced to take deep inspirations whereby the thorax is much expanded. The standing position is then resumed, and the thoracic muscles relaxed, when a deep inspiration is practiced. These two movements are performed alternately from twelve to twenty times a minute.

If the patient is too sick or too feeble to take any of these various exercises, either free-hand or with apparatus, he can be given passive respiratory exercise, much after the manner of the Sylvester method for producing artificial respiration. Sitting upon a bench or stool, and leaning upon the chest of an attendant standing behind him, the arms are raised above the head synchro-

nously with inspiration. With the lowering of the arms, and pressure against the sides, forced expiration is produced. This can also be practiced in the recumbent position.

Although the movements of inspiration are the most important in the respiratory act, yet expiratory exercises have their place. These are generally passive, like the act itself. One which Lagrange especially notes is the following: The subject lies flat upon the abdomen on the floor or a bench, and raises his head and shoulders, thus contracting the extensor muscles of the vertebral column. In this attitude the abdominal muscles are stretched and prevented from contracting and pulling down the chest-walls. Forced expiration is then practiced. In emphysema especially, expiratory movements are useful; these can be simple direct pressure upon the chest-walls, with various manipulations of the thoracic muscles, or a peculiar Swedish movement also noted by Lagrange, which has for its object the mobilization of the semi-anchylosed chest-wall, a condition existing in chronic emphysema: The patient is seated astride a narrow bench, or his legs are held, and two attendants, seizing him by the shoulders, rotate the trunk upon its axis, alternately from right to left, and from left to right, the object being to mobilize the vertebro-costal articulations and to restore movement to the chest-walls.

Beside all these methods of respiratory exercise, there are certain machines or apparatus devised by Zander and Nycander. Some excite deep inspiration by passive movements for raising the ribs; others render the expiration more complete by compressing the ribs through the use of girths or straps which act upon the thoracic walls at the moment when the lungs empty themselves of air. The latter machines are said to render great service in pulmonary emphysema, where the expiration is always laborious and incomplete.

Finally, we have massage of the respiratory muscles, which the Swedish physicians always prescribe at the same time the active and passive gymnastic movements are given.

As will be seen, the exercises available to produce better respiration are very numerous and varied, but the underlying principle is simple, namely, to bring into more vigorous play the muscles which expand the thorax, and at the same time excite deep, full, free breathing; to bring the vital force of the lungs to its maximum. It must be borne in mind that all exercises of the thoracic muscles for the purpose of producing an increase in that cavity must at the same time be coincident with deep breathing; the amplitude of the respiratory movements must be increased; the lungs must push out from within as well as the thoracic muscles pull from without. Once having established a proper respiration by the use of some of the simple respiratory exercises, and devoting a few minutes to it every day, the habit of full and deep breathing is formed even when one is in a state of repose. And further, one is fortifying himself against the possibility of disease of the lungs by thus maintaining the pulmonary tissue in an active, healthy, and well nourished condition, and there is no portion of the apices which from insufficient use and poor nourishment is a menace to the individual by offering a fitting soil to a wandering bacillus. In convalescence from pneumonia and pleurisy with effusion, the importance of expanding and revivifying, as soon as possible, the lung whose functional capacity has been diminished and whose nutrition has been depressed, can hardly be overestimated. As Lagrange truly says: "In all the inflammatory maladies of the lungs there persists a tendency to stasis and passive congestion, to correct and obviate which no means is more efficacious than very ample and deep inspiration."

When the border line has been passed and incipient phthisis has been developed, respiratory exercises are a most important and precious means for restoring the weakened lung tissue and increasing its resisting power. The beneficial effects of the high-altitude treatment are largely due to the fact that one is compelled to breathe fully and deeply in order to obtain the requisite amount of oxygen.

In every well arranged plan of treatment of pulmonary tuberculosis, where any exercise at all is allowable, pulmonary gymnastics, carefully arranged and adapted to the strength and condition of the individual, should be embraced. In the famous sanitaria abroad, where such excellent results are obtained, they play an important part in the treatment. We may in the future obtain a serum product which will accomplish all that was hoped for from tuberculin; but one must not forget that large numbers of consumptives are now being cured and restored to usefulness by means of the persistent application of nature's remedies, sunlight, abundant alimentation, continuous outdoor life, hydrotherapy, and good breathing. The *vis*

medicatrix naturæ may not always give brilliant and rapid results, but when intelligently employed it is a method which rarely disappoints either the confiding physician or the trusting patient.

AN OINTMENT FOR PAINFUL DEFECATION DUE TO FISSURE.

℞ Extract of conium, 1 drachm;
Castor oil, ½ ounce;
Lanolin, 1 ounce.

—*Journal des Praticiens*, May 9, 1896.

ANTI-STREPTOCOCCIC SERUM IN PUERPERAL FEVER.

LETRAIN describes the following case in the *Progress Medicus:* "Madame R., age twenty-five, living at Joen-en-Charnrei, was confined February 7, 1896, by a midwife of the locality. On the 10th she was seized with a severe rigor, and on the 13th I was called in to take charge of the case. The diagnosis was not obscure: the woman was evidently suffering from grave puerperal sepsis, but the immediate source of the infection was indeterminate. I may mention, however, that the lying-in room was reeking with emanations which came from an adjoining privy through an ill-fitting door! At my second visit on the 15th the patient's condition had changed for the worse: she was semi-delirious; temperature 104.7°; pulse 150, small and compressible; abdomen swollen, and very tender on pressure; tongue dry; there was fetid diarrhea. The case seemed too far gone for curetting of the uterus. In this opinion I was supported by Dr. d'Lageniere Mans, whom I had occasion to meet during the course of the disease. I promptly telegraphed to Dr. Recin, of the Pasteur Institute, who, with alacrity for which I shall be forever grateful, at once gave an order for me to be supplied with the anti-streptococcic serum wanted. On the morning of the 16th, the temperature being 104.3°, pulse 148, five cubic centimeters of the serum were injected. On the 17th, temperature 101.3°, pulse 120, the second injection was administered. On the 18th, temperature 100.4°, pulse 110, another injection of five cubic centimeters was given. On the 19th, temperature 104°, pulse 130, the patient complained of pain at the seat of the first injection, and on examination it was found that at this point there was a slight tumefaction, with redness and puffiness of the integument. On the 20th the fourth injection was administered; temperature 98.2°, pulse 80; the inflammatory phenomenon of the preceding day had disappeared; the patient felt quite well. Another injection was given on the 22d; temperature 98.6°, pulse 70. The abdomen had returned to the normal condition, sustaining pressure everywhere without pain. The diarrhea had ceased, and the patient had now a good appetite. The sixth and last injection of five cubic centimeters was given, and henceforth the case progressed most favorably, and at my last visit on the 1st of March I found Madame R. enjoying perfect health."—*The Scalpel*, June, 1896.

THE USE OF INTRA-VENOUS INJECTIONS OF SALINE SOLUTION IN INFECTIOUS DISEASES.

LEJAR reported to the Société de Biologie, May 11, 1896, the results of his study of this method. His first case was that of a young boy of seventeen years who was suffering from acute osteomyelitis of the upper half of the left femur; there was a large subperiosteal abscess, and his general condition was alarming, breathing hurried, pulse small and frequent. A few days later another abscess developed, on the sternum, which on examination was found to contain the *Staphylococcus pyogenes aureus.* On the 22d of March he was given a subcutaneous injection of between one and two pints of normal saline solution and two intra-venous injections of two quarts. The temperature fell several degrees, and the injections were repeated again and again. During the course of five days the patient received no less than fourteen quarts of artificial serum. The symptoms of general infection disappeared, the abscess improved, and altogether the progress of the case was favorable.

The second case was that of a man aged fifty-two, who had met with an accident by which his left foot was injured and a large portion of the left temporal region of the head contused, the skin being filled with small particles of coal dust. During the night it was necessary to amputate his left arm, and on the next day amputation of the right leg became necessary. The patient was febrile, pale, and in a condition of shock. An intra-venous injection of two quarts of artificial serum was given; and on the next day, the fever still being present, the pulse small, and the patient in delirium, another injection of two quarts was given. During the next two succeeding days four quarts

were employed, and on the following day four quarts more. Six days after the injury the patient's pulse was good, his delirium had ceased, and the injections were suspended. The delirium returned in the night, and an injection of two quarts was given for its removal. The disagreeable symptoms then disappeared, the temperature went almost to normal, the appetite revived, and the case progressed favorably.

The third patient was a young woman twenty-one years old, operated upon for a very large cystic ovary. Seven hours after the operation, she was seized with a chill, the pulse became very feeble, vomiting supervened, the temperature rose several degrees, and there was great pain in the abdomen. The case threatened to terminate fatally in a very short time. An intra-venous injection of seven pints of artificial serum was given, and ten hours later another of three quarts. That night the patient was quiet, vomiting ceased, the pulse was good, and the results produced were altogether most favorable.

Dejar believes that these injections are of the utmost value, and that the great difficulty is that they are not used in sufficiently large amounts. In ordinary conditions subcutaneous injections are sufficient, but where the condition is urgent the intra-venous method should be employed. It is necessary, however, for the success of the treatment that the kidneys be able to eliminate the infectious materials with the liquids. In two cases which he knows of, the kidneys did not excrete the liquid, and at the autopsy they were found to be in a condition of sclerosis.

Oussoff does not believe that a complete explanation of the value of these injections can be offered, but he insists upon their practical utility.—*La Médecine Moderne*, May 13, 1896.

CHLOROSIS, WITH ESPECIAL REFERENCE TO ITS TREATMENT BY INTESTINAL ANTISEPTICS.

TOWNSEND, in the *Boston Medical and Surgical Journal* of May 28, 1896, reports having treated thirty out-patients with beta-naphthol, without iron, for purposes of intestinal antisepsis. Two grains were given three times daily, and the average length of treatment was twenty-three days. The average gain in hemoglobin per week in these cases was a little less than two (1.85) per cent., the greatest gain being ten per cent. for two weeks and six per cent. for five weeks. The patient that did the worst lost 7.5 per cent. per week for two weeks.

After three weeks of beta-naphthol treatment, if the patient gained less than two per cent. of hemoglobin a week she was put on Blaud's iron pills.

There were thirty-one cases treated with Blaud's pills, five grains only, t.i.d., for an average period of four weeks. The average gain per week was a fraction over five per cent. (5.07), or more than two and a half times as much as in the case of beta-naphthol. In Dr. Stone's cases treated in the clinic with Blaud's pills, a gain of five per cent. per week is stated to be a fair average.

As so many cases were constipated (sixty-five per cent.), and as this symptom was always treated with cascara, whether the patient was given beta-naphthol or iron, it seemed to the writer of interest to treat a series of these constipated cases with cascara alone. Seven cases were so treated, to some of these nux vomica and hydrochloric acid being also given where the stomach was disordered. The results, however, were not encouraging, as these cases, after treatment averaging two weeks and one day, lost on an average one and a half per cent. of hemoglobin a week. The greatest gain made was but four per cent. in one case. These results, as well as the thirty-five per cent. of the cases of chlorosis without constipation, do not bear out Sir Andrew Clark's deduction that chlorosis is largely dependent on constipation.

Of the thirty-one cases treated with iron, twelve had previously had a preliminary treatment for three weeks with beta-naphthol, with an average loss of one-twelfth of one per cent. When put on iron these gained 6.7 per cent. per week, for an average of thirty-two days. This certainly shows the superiority of the iron treatment in these cases, and seems also to point to a certain advantage from the preliminary treatment with beta-naphthol; for of nineteen cases treated with iron without the preliminary beta-naphthol treatment, the average gain for three and one-half weeks was 4.5 per cent. per week. A simple computation will show, however, that at the end of seven weeks the last set of cases continuing the slower gain would be ahead of the other cases with the two sets of treatment. What the effect of a combination of the two treatments at the same time would be, the author is now trying to find out at the hospital, and the field looks promising from the results obtained above.

TABULATED SUMMARY OF TREATMENT, SHOWING AVERAGE GAIN IN HEMOGLOBIN PER WEEK.

	Per cent.
Beta-naphthol, 30 cases	1.85
Blaud's iron pills, 31 cases	5.07
Cathartics alone, 7 cases	1.50
Blaud's pills, after a preliminary treatment with beta-naphthol, 12 cases	6.70
Blaud's pills, without a preliminary treatment with beta-naphthol, 19 cases	4.50

Since the above was written, the writer has been able to test the effect of iron and beta-naphthol combined in three months' service in the Out-patient Female Medical Department of the Massachusetts General Hospital. During this time ninety-two cases of chlorosis were recorded. Of these, twenty-eight were observed from two to seven weeks, or an average of 4.3 weeks. Those seen once or twice only are excluded. In all, the hemoglobin was estimated at each visit, and, to make sure of the diagnosis, the blood was counted once. For this work the author is indebted to the externe, Mr. W. H. Smith, and a number of able assistants. The average of two readings of the hemometer was always taken, and without knowledge of the percentage obtained at the previous visit, the examiner thus avoiding prejudice. The cases were all treated with two grains of beta-naphthol in tablet form and five grains of Blaud's iron pills three times daily.

The average gain per week in these twenty-eight cases was 7.9 per cent., the maximum gain being 20 per cent. per week for two weeks in one case, 14 per cent. for three weeks in another, 13 per cent. for four weeks in another, while another patient averaged a gain of 11.4 per cent. a week for five weeks.

The average amount of hemoglobin possessed by each patient before beginning treatment was 48 per cent. After 4.3 weeks of treatment it was 82 per cent. The rapid return of health, as shown by the symptoms of the patient and the improvement in color, was often most striking.

The results of this combined treatment, as will be seen, are considerably better than those obtained with iron alone, and much better than those with beta-naphthol alone.

PREVENTION OF THIRST FOLLOWING ABDOMINAL OPERATIONS.

JOHN G. CLARK contributes an interesting paper of great practical utility to the *Maryland Medical Journal* of May 30, 1896, upon this subject. He points out that of the minor complications following abdominal operations, thirst is one of the most common and in some cases exceedingly distressing. He recalls numerous instances where patients have resorted to every means possible to obtain water. One patient, a negress, in the wards of the Johns Hopkins Hospital, after an exceedingly grave operation, got out of bed while the nurse was absent a few moments from the room, and crawled to a water-cooler some distance away.

The rule usually followed by surgeons is to withhold liquids for twenty-four hours, until the patient is free from nausea and vomiting, after which water is given in small quantities.

When we consider the amount of waste products which must be thrown off through the various excretory channels following an abdominal operation, we must admit there is ample cause for intense thirst, and if there is no compensation for twenty-four to thirty-six hours the distress of the patient is frequently intense. The mere administration of ether without operation is often followed by intense thirst. Add to this factor a prolonged operation, with more or less loss of blood, and we have three potent co-operating causes for the production of this complication.

Numerous plans have been suggested to prevent thirst; among the latest, one by Dr. Hummiston, of Cleveland. His plan is to place the patient on a greatly increased water diet for three days before operation, thus hoping to store up sufficient residual water to tide the patient over the first twenty-four hours after operation. This plan may be of service in cases where it is possible to put it into effect, but in the usual hospital practice and in many operations performed in private houses it is not possible, as in many instances the case is an emergency one and requires operation within twenty-four hours after being seen by the surgeon. This is especially true in gunshot wounds of the abdomen, appendicitis, ectopic pregnancy, etc., and it is in these cases that the thirst is the most intense, and vomiting, which prevents the administration of water, the most frequent.

It has been the practice for many years in medical and surgical cases to administer water by the rectum when, for any reason, it was interdicted by the mouth, but the routine injection of saline solution (0.6 per cent.) as a systematic procedure for the control of thirst after abdominal operations has not, so far as the author knows, been employed.

For the last two years it has been a part of the concluding technique of every abdominal

operation performed in the Gynecological Department of the Johns Hopkins Hospital, to inject one liter of normal salt solution into the rectum, and the result has been so very satisfactory that it is now proposed to adopt it for all operations, even of minor degree.

In order that the patient may retain the enema, she must be still under the anesthetic when it is given; otherwise the rectum will not tolerate such a quantity of liquid. For this reason it is impossible to give liquids in sufficient quantities in the conscious subject to be of any great service in assuaging the thirst.

At the conclusion of the operation, before the abdominal dressings are applied, the patient is elevated to the medium high Trendelenburg posture, a stiff rectal tube is inserted well up into the sigmoid flexure, and the fluid slowly poured into the glass funnel, which is held three or four feet above the level of the patient's buttocks. In this posture the solution gravitates downward into the sigmoid flexure and colon and is very rarely expelled, even during the most violent attacks of retching and vomiting during the recovery from anesthesia.

Clark has reviewed the special charts of one hundred abdominal-section cases which have not had the benefit of this treatment, and one hundred cases which have, and he is able to report the most gratifying results, not only as regards alleviation of thirst, but also in the reduction to a minimum of vesical irritability, so common in operative cases.

One or two months after the adoption of the plan the head nurse in the gynecological wards began to report the most remarkable improvement in the intense thirst usually experienced by the patients. Up to this time the nurses had not been informed of the means being employed to prevent this complication, as the surgeons desired to obtain an unsolicited and unbiased report from them. From this time, however, they were instructed to make the most critical observations concerning the presence or absence of thirst; and in the one hundred charts, which have been taken at random from the history files, there is very rarely any note made further than that the patient passed her first twenty-four hours without even asking for water.

Another most conclusive evidence of the effect of these enemata is shown by the increase in the urinary excretion. Reference at this point to Dr. Russell's paper on "Urinary Analysis in Gynecology," published in the *Johns Hopkins Hospital Reports*, 1894, is of especial interest, as the urinary excretion of one hundred abdominal cases under the new regimen shows a most remarkable increase over that noted by Dr. Russell.

In Dr. Russell's paper the frequency of vesical irritability in post-operative cases was attributed to the retention of small quantities of highly concentrated urine in the bladder, which possessed more than the normal amount of organic salts with greatly decreased watery constituents. This hypothesis is unquestionably a correct one, as vesical irritability is comparatively infrequent in the cases of the last year. Catheterization is much less frequently required, and consequently post-operative cystitis is infrequent.

The natural result of almost doubling the watery constituent of the urine is to decrease the specific gravity. In cases where the enemata were not given, the average specific gravity of the urine was 1.030, while in those receiving them it showed a reduction to 1.022.

The average quantity of urine excreted for the first seven days after operation in the two sets of cases was as follows:

WITH SALINE ENEMATA.		WITHOUT SALINE ENEMATA.	
First day	752 Cc.	First day	481 Cc.
Second day	626	Second day	505
Third day	605	Third day	498
Fourth day	635	Fourth day	550
Fifth day	654	Fifth day	595
Sixth day	672	Sixth day	656
Seventh day	646	Seventh day	591

The lowest point in the urinary excretion is reached on the third day, which is accounted for by the fact that on the evening of the second day the cathartic is given, and usually acts on the third day.

Soft diet is begun on the fifth and sixth days, and as a result there is another drop in the urinary excretion, as the patient is then taking more of soft than of liquid diet.

At the end of the fifth day the excretion in both sets of charts corresponds, and from this time on gradually increases until the normal is reached, about the twelfth day.

When one sees the intense thirst which patients experience after operation entirely alleviated in the great majority of cases by this means, he will be more strongly convinced of its efficacy than by the mere citation of statistics.

THE USE OF MALAKINE AS AN ANTI-RHEUMATIC.

In 1893 Jacquet called attention to the anti-rheumatic preparation known as malakine, and during the last few months Bauer

and Merkel have studied its action, arriving at opposite results: Bauer regards it as inferior to the salicylates, but Merkel, on the contrary, considers it superior. One of its advantages is that it does not seem to be as poisonous as salicylic acid.

Recently Korotkoff and Oussoff published reports of three cases in which they employed this drug. The first case was one of articular rheumatism without complication; in the second the trouble was subacute and there were nervous phenomena; and in the third the attack was acute but very grave and associated with endocarditis. In all three cases the malakine produced a good effect in from three to four days; the temperature returned to normal without notable oscillation, and the pain ceased. The dose is from forty-five to sixty grains a day, and they did not discover any of the disagreeable symptoms of cinchonism which follow the use of salicylic acid.—*La Médecine Moderne*, May 13, 1896.

AN OINTMENT FOR MUMPS.

According to the *Journal des Praticiens*, May 9, 1896, TRANCHET recommends the following:

℞ Ichthyol,
Iodide of lead, of each, 45 grains;
Chloride of ammonium, 30 grains;
Lard, 1 ounce.

This ointment is to be applied to the swollen parts three times a day. In some instances vaselin may be used in place of the lard, and sometimes belladonna may be added with advantage.

THE TREATMENT OF SYDENHAM'S CHOREA.

In the issue of the *Journal de Médecine de Paris* of May 17, 1896, CHERON concludes a paper upon this topic. In an earlier issue of the journal he had discussed the pathogenesis of this affection. He quotes Gubler, Vulpian and others as having employed bromide of potassium with advantage in a certain number of cases for the purpose of allaying nervous irritability, and calls attention to the fact that Bastian has used with advantage a potion containing chloral and bromide. Again, Volner, Texier and Dupré claim that antipyrin is of very great value, and Simon uses this drug as follows: On the first day he gives to the patient, after meals, twenty grains of antipyrin in three cachets, on the following days decreasing the dose gradually until it amounts to but one drachm in twenty-four hours. Under these circumstances he claims that the choreic movements entirely disappear. A child who had suffered from chorea for two years, and in whom the usual drugs had failed to produce a cure, was cured in nine days by the administration of as much as one ounce of antipyrin during that time. In sixty observations made by Legroux, he had forty-one cures and nineteen failures. Of these forty-one successes, the cure was produced in from thirteen to twenty-one days. Cheron also quotes Eskridge of Colorado as having given doses of antipyrin to choreic cases with advantage, and Moncorvo and Oulmant have gotten similar results.

For the treatment of the general condition, there is little doubt that arsenic is after all the best remedy. Where it cannot be tolerated by the stomach, Cheron believes it should be administered as a hypodermic injection in the form of Fowler's or Pearson's solution. Of twenty-three cases in which these injections were employed by Wiederhofer, in three instances an abscess was formed, and in twenty-two children out of the twenty-three a cure was obtained in four weeks. Wiederhofer recommends the injection of Fowler's solution and distilled water, equal parts. The only difficulty is that the injection is very painful. When arsenic is administered by the stomach it must be given in ascending doses, and gastro-intestinal irritation or cutaneous pigmentation may result, in which case the drug must be stopped. Should anemia be present, iron is of value.

In conclusion, Cheron remarks that cold applied to the vertebral column by means of ether in an atomizer or chloride-of-methyl spray has seemed to do good. Gymnastics are also of value, and in some instances if the children are sturdy a cold douche may be applied to the spine.

THE TREATMENT OF CHRONIC ULCERS BY COLD COMPRESSES.

La Médecine Moderne of May 13, 1896, calls attention to YAKOWLEFF's methods with cold compresses, used with success in the treatment of chronic ulcers, and claims that they cause rapid cicatrization. He explains their usefulness by the theory that the local circulation is thereby rendered more energetic, and hence the nutrition of the tissues is improved. The treatment has the advantage that the compresses do not adhere to the ulcer and provoke irritation.

THE TREATMENT OF CHOLERA MORBUS.

The *Journal des Praticiens* of May 16, 1896, tells us that the principal indication for this condition is the administration of lactic acid for the purpose of rendering the intestinal canal antiseptic. The following prescription is recommended:

℞ Lactic acid, 2 to 4 drachms;
Sugar of milk, 2 ounces;
Boiling water, 1 quart.

This mixture is to be taken during the course of twenty-four hours. For the condition of chilliness or collapse which may come on, alcoholic drinks should be given, preferably hot; irrigations and hot baths may be of service. Intra-venous injections of saline solution may also be employed if great prostration is present.

Mathieu recommends that injections be administered very slowly for the period of twenty to twenty-five minutes, of as much as six ounces of the following mixture:

℞ Distilled water, 1 quart;
Sulphate of sodium, 2½ drachms;
Chloride of sodium, 1 drachm.

Great care should be taken by persons who have a predisposition to cholera morbus to avoid iced drinks and green fruits.

IODIDE OF POTASSIUM OR IODIDE OF SODIUM.

According to BRIQUET, the sodium iodide is preferable to potassium iodide in all maladies of the respiratory tract and for certain rheumatic pains. The potassium salt is badly tolerated in many instances of hepatic disease, but is undeniably good in these cases. He has found that where the patients do not tolerate iodide of potassium well, the employment of iodide of sodium first prepares them for the potassium salt. He has also been able to get the effect of the iodine in many patients by the use of the sodium salt when the potassium was contra-indicated because of its depressant effect.—*Revue Internationale Médecine et de Chirurgie*, April, 1896.

THE TREATMENT OF OPIUM POISONING BY PERMANGANATE OF POTASSIUM.

The *British Medical Journal* of May 16, 1896, contains an article with this title by MAYNARD, who states that while officiating as resident physician at the Medical College Hospital, Calcutta, he had unusual opportunities of seeing and treating cases of opium poisoning. He employed the treatment in nineteen cases, the following solutions being used:

No. 1 solution:

℞ Potass. permang., gr. x;
Acid. sulph. dil., ʒij;
Aq., O j.

As this does not keep well, the sulphuric acid has to be kept separately, and the quantities in the stock mixtures are so arranged that two drachms of the permanganate and two drachms of the sulphuric acid in concentrated solution, added to a pint of water, provide the proper amount for use.

No. 2 solution:

℞ Potass. permang., gr. ij;
Aq., O j.

This is also kept in a concentrated stock mixture, and, though used as here given, would probably have acted better if mixed with sulphuric acid like No. 1.

No. 3 solution:

℞ Potass. permang., gr. j;
Aq., ♏ xx.
For hypodermic injection.

At first the treatment was carried out as recommended by Dr. Moor (*British Medical Journal*, June 22, 1895)—namely, by introducing two or three strong acidulated permanganate solutions into the stomach at intervals, and afterward weaker solutions at intervals for some hours, to oxidize any morphine that might be re-excreted into the stomach. If was found, however, that these solutions, if allowed to escape through the stomach-tube, returned discolored, and as this indicated organic matter (or opium) remaining, it was soon decided to wash out the stomach with weaker permanganate solution until it returned pink; and the following instructions were finally issued to the house physicians regarding the use of the stock solutions:

1. Wash out stomach twice with plain water, keeping washings for chemical examiner.

2. Wash out stomach with No. 2 solution until washings come back pink, retaining the solution in the stomach one minute each time.

3. Then introduce No. 1 solution, and leave it in the stomach.

4. Repeat No. 1 solution twice, at intervals of half an hour.

5. Then give No. 2 solution every half-hour until complete recovery.

The ordinary stomach-pump tube has too

small eyes to allow of the contents of the stomach being thoroughly washed out, and it is better to use a tube entirely open at the stomach end—an ordinary half-inch drainage tube answers the purpose. A pump, by means of which the solution can be forcibly injected, is better for dislodging the adhering opium than an elevated funnel, which only causes a gentle stream to enter the stomach.

The amount of permanganate required depends, of course, upon the amount of drug taken. The washings must be continued until the solution returns pink. Experimentally it was found, when permanganate solution was added to opium in aqueous solution and shaken, that the mixture ceased to give any reaction with pure nitric acid after 1.25 parts of permanganate had been added (taking the opium present at one part by weight); it ceased to smell of opium after the addition of 3.5 parts, and to be discolored after 10 parts of permanganate had been added.

The general effect of permanganate of potash does not appear to be poisonous. No reference to it is to be found in text-books on toxicology. One cannot imagine it being absorbed as such, and the hydrated dioxide of manganese is non-poisonous. Locally it is an irritant, and, if in strong enough solution, an escharotic. In no case, however, were any signs found, either after recovery or on post-mortem examination, of its having caused inflammation of the gastric mucosa. Much decomposed permanganate (hydrated dioxide), but no trace of inflammation, was found on post-mortem examination at the site of hypodermic injections, while other cases that recovered after hypodermic injections showed no ill-effects. Vomiting after the introduction into the stomach of permanganate solution may be taken as a good sign, as it indicates a return of excitability in the gastric mucosa, and is only met with during recovery.

Dr. Moor states that permanganate decomposes morphine sulphate infinitely more rapidly than albuminous matter, and that it selects the former when both are present; and in opium poisoning he gives dilute sulphuric acid or white vinegar with the permanganate, on the ground that the insoluble morphine will be thereby at once converted into the soluble sulphate or acetate. This can hardly be the true rationale, however, as, while morphine acetate is very soluble in water (1 in 12) and spirit, morphine sulphate is only half as soluble in water (1 in 24, the same as the hydrochlorate) and but sparingly soluble in spirit; and the explanation, if it holds for the acetate, will not do so for the sulphate.

The truer explanation is probably to be found in Lauder Brunton's statement (taken from Stoluikow) that "the activity of morphine appears to depend on the presence of hydroxyl (HO) in it. When this is replaced by SO_4, its activity is greatly diminished." The antidotal power of permanganate—such as it is—is probably due still more, however, to the oxidation of the alkaloids. To quote Brunton again: "In the alkaloids produced from morphine by oxidation (oxy-dimorphine and oxy-morphine) their narcotic action is diminished without the convulsant action being increased." When given by the stomach with sulphuric acid, therefore, permanganate may be regarded as acting in three ways—(1) by substituting SO_4 for HO in the morphine present; (2) by oxidizing the morphine present; and (3) by mechanically washing out the opium present—and in his opinion its special value lies in that its discoloration (deoxidation) tells us readily whether any opium remains to be removed.

As regards hypodermic injection, Dr. Moor says: "While a part of the potash salt is reduced by the subcutaneous tissues, yet enough remains to find its way to the circulation to select the morphine out of the albuminous constituents of the blood." It is difficult to believe this is possible of a very readily deoxidized substance like permanganate of potassium, and the appearances in Dr. Maynard's post-mortems make it even less likely. What Brunton says of permanganate is quite applicable: "It very readily parts with its oxygen, and thus destroys completely the deadly power of the latter, and the mixture may be injected subcutaneously without any bad effects. When injected after the poison, however, it does not appear to come into such immediate contact with it in the tissues as to destroy it, and it therefore does not act as an antidote."

In considering the results of any mode of treatment of poisoning by opium (or by any other drug), statistics are practically useless unless extending over a considerable number of years. The quantity of poison taken, time elapsing before treatment, previous health of the patient, etc., all vary widely, and in each case must be judged alone.

The peculiarities of administration of the drug in different countries have also to be considered. In Western countries, where morphine is more often swallowed in solution

or injected hypodermically, and where the patients are more quickly brought to hospital, it is possible that the permanganate treatment may answer better. It might even be possible to inject the permanganate at the same spot in morphine-injection cases, as in Calmette's treatment of snake-bite with hypochlorite of lime, and perhaps with more success. But in the East, opium itself is most commonly swallowed, either alone in hard masses or intimately mixed with oil of various kinds, or spirits; the patient is frequently not treated until much of the poison has been absorbed (especially if it has been mixed with spirit), and when brought to hospital the difficulty of removing what remains is great, especially if it has been taken mixed with oil.

Surgeon-Major Gibbons, whose experience of opium-poisoning cases and their treatment by the classical methods is unique, and who made the post-mortem examinations in the fatal cases herein reported, informed the writer that he found no lumps of opium in any of those treated with permanganate, such as he frequently has found in those treated by the ordinary methods. On the other hand, he has among these latter met with cases showing no trace of opium in the stomach (in eighteen out of forty-four in 1893–94), so that more numerous post-mortem records are required to make it certain that the good results are really due to the use of permanganate.

For the reasons given it is unwise to draw any dogmatic conclusions from the results of Maynard's nineteen cases.

Fifteen of the cases were Hindus; 13 were males and 6 females; 14 were aged from eighteen to twenty-six years, and 2 mere babies; 10 were suicidal, and 9 accidental; 8 were opium-eaters. Six died, and in these cases the amount of opium varied from 16 to 360 grains. Three of the fatal cases were treated within two hours of taking the drug, and Case X, dying from sixteen grains, should probably be added to these three. Six deaths out of nineteen treated gives a mortality of 31.5 per cent., compared with a mortality of 35 per cent. met with in ninety-seven cases treated in the Medical College and Mayo Hospital during the year 1893.

To sum up, we may say that permanganate of potassium is a strictly local antidote; it can only act upon such opium as it comes into contact with in the stomach, and can have no effect upon what has already been absorbed. That it oxidizes morphine reexcreted into the stomach, does not affect this statement. The treatment is excellent as leading to thorough washing-out of the stomach, and at the same time affording a reliable indication when this is accomplished; but it is not to be expected that it will save life where a lethal quantity has already been absorbed into the circulation, nor can it be regarded as a physiological antidote to opium such as eserine is to atropine.

LUFF states that when the quantity of morphine that has been taken is known, the administration of a quantity of potassium permanganate slightly in excess of the morphine is useful. If it is laudanum that has been taken, and the quantity is known, six grains of potassium permanganate should be administered for each fluidounce of laudanum taken. If in any case the quantity of morphine or opium taken is unknown, from eight to ten grains of the permanganate should be administered, according to the severity of the symptoms.

It should be given dissolved in from four to eight ounces of water. The stomach should afterwards be washed out two or three times, at intervals of half an hour, with a weak solution of permanganate, in order to decompose the morphine that has been absorbed and that is being excreted into the stomach. In cases of poisoning by the hypodermic injection of morphine, he does not think the hypodermic injection of the permanganate would be of any use, but the washing out of the stomach with the weak solution of the permanganate should certainly be resorted to. In cases of threatened respiratory failure, strychnine or atropine (the former preferably) should be administered hypodermically in order to stimulate the respiratory centre, and artificial respiration should be resorted to if necessary.

CREOSOTE IN GONORRHEA.

ASMUS (*Meditzinskoie Obozrenie*, No. 10, 1896) reports fifty-eight male cases of acute gonorrhea successfully treated with injections of from two- to ten-per-mille emulsion of creosote. The discharge quickly decreased, became mucoid, and then ceased altogether. The patients recovered more rapidly than under the ordinary methods of treatment; complications developed but rarely, and no relapses occurred. In addition, creosote seemed to exercise an anesthetic action on the urethral mucous membrane.—*British Medical Journal*, July 11, 1896.

THE TREATMENT OF PRURITUS OF THE SCROTUM.

The *Journal de Médecine de Paris* of April 19, 1896, recommends the following:

℞ Picric acid, 4 grains;
Vaselin and lanolin, of each, ½ ounce.

Or,

℞ Picric acid, 15 grains;
Vaselin or lanolin, ½ ounce.

This preparation, it is said, will cure in a few days cases of pruritus of the scrotum that have lasted for years. Owing to the toxic properties of the picric acid, feeble applications are necessarily made, and two applications of the salve in one day are sufficient.

Attention is also called to the fact that picric acid in the strength of one to five parts to 1000 is useful in relieving the pain following burns, but that it must be used with caution.

CRITIQUE OF THE SERUM TREATMENT IN DIPHTHERIA.

Dr. P. BERNHEIM, of Berlin (*Therapeutische Monatshefte*, June, 1896), says there is no doubt that the question as to how far the mortality of diphtheria has been influenced by the treatment with Behring's serum is to be solved by statistics. Most of the statistics hitherto furnished are from hospitals, and, as Gottstein has repeatedly pointed out, are so full of sources of error that they cannot be relied upon to show whether or not the observed fall in mortality is due to the serum or to other and hitherto unknown processes. We can best get light on the subject if a large and in itself conclusive mass of cases, free from the sources of error urged by Gottstein, is sifted and arranged statistically. With this in mind, Bernheim draws upon his experiences for twenty years past.

In one table he gives the number of cases seen between April 1, 1876, and April 1, 1896. These cases are reported from accurate notes which he has of every case of diphtheria seen in private practice between 1876 and 1886; from 1886 on, his records from private practice are no longer complete, and are only conditionally valuable, the cases recorded not having been arranged according to years. Hence, from 1886 he has drawn his material from a large sick-benefit society to which belonged women and children. He mentions, however, that in private practice from 1886 to 1896 he had at least sixty-two cases of diphtheria, with nine deaths; from 1893 to April 1, 1896, there were sixteen cases and one death.

In all his cases the disease was clinical diphtheria—that is, only such cases are included as showed more or less extensive membrane clinging to the mucous membrane. Scarlet-fever diphtheria and all cases presenting the clinical picture of lacunar or follicular disease of the tonsils are not counted. No case was examined bacteriologically, and only one was treated with serum and cured. He has included among the dead a few who were sent to the hospital for tracheotomy and of whom he did not learn anything subsequently. Otherwise those who were sent to hospital are placed in the tables according to the issue of their cases.

Bernheim has also tabulated his cases of follicular tonsillitis observed during the same period. These cases vary in numbers according to the prevalence of diphtheria. Apparently the same causes which make the throat a good soil for the Loeffler bacillus make favorable conditions for the streptococcus.

Bernheim's first table shows that in twenty years he treated 352 cases, with a mortality of 19.9 per cent. If the sixty-two cases previously mentioned are included, the number becomes 414, and the percentage of mortality 19.3 per cent. The number of cases gradually increases from eight in 1876 to sixty-three in 1883, and then gradually falls again. Arranging the cases in periods, it is seen that from 1876 to 1880 there were 57 cases, with a mortality of 15, or 26.3 per cent.; from 1881 to 1886, 222 cases, with 46 deaths, or 20.5 per cent. mortality; from 1887 to 1896, 73 cases, 10 deaths, mortality 13.7 per cent. If in this period the 62 cases already referred to are added, the result is 135 cases, with a mortality of 14 per cent.

Therefore, in these twenty years there has been a fall in the mortality, independently of Behring's serum, of twelve per cent.

In table II the author arranges the cases in successive years from 1876 to 1896, 1877 to 1896, 1878 to 1896, and so on, showing that there has been a pretty steady decline in mortality from 19.9 per cent. to 7.7 per cent. in the period from 1893 to 1896. He accounts for this lessening mortality by saying that for eleven years there has been an absolute diminution in the number of the cases of diphtheria and in the intensity of the individual cases. He asserts that every one who has seen much of diphtheria during the period covered by his statistics must have noticed the lessening virulence of the disease.

Bernheim also asserts that the statements regarding the behavior of the symptoms under the serum treatment are full of contradictions: while one sees a rapid fall of temperature, another sees an excessive rise; one observer sees an acceleration, another a slowing, of the pulse; this observer reports a rapid casting off of the membrane, another denies that any change can be noted. Albuminuria, sudden heart-palsy, and other paralytic conditions are said not to be rare during convalescence (Drews). Engel-Bey (*Berliner Klin. Woch.*, 1895, p. 856) says: "Even among the seventeen fatal cases there was observed in twelve cases disappearance of the pseudomembrane, of the glandular swelling, of the fever, and in other ways more or less decided improvement." But Bernheim says that the older physicians used to regard these symptoms as very unfavorable. He concludes that no specific action has been shown by the remedy as yet, and he fears that a severe epidemic may completely destroy our hopes in it.

THE ACTION OF CAFFEINE ON BLOOD-PRESSURE.

VINCI, in the *Archivio di Farmacologische Terapeutica*, reports the results of a long series of experiments made in the pharmacological laboratory of Massina. He found that in dogs and rabbits the caffeine always produced a rise of arterial pressure very much like that produced by digitalis. In starving animals the rise of arterial pressure produced by caffeine was in direct proportion to the feebleness of the animal, but in all cases the action of the caffeine was prompt and persistent. He therefore offers a physiological explanation of the value of caffeine in disease of the heart where that organ lacks compensatory hypertrophy.

TREATMENT OF ERYSIPELAS WITH VASELIN.

KOESTER (*Therapeutische Monatshefte*, June, 1896) treats erysipelas in the following way: Vaselin is applied to the affected and surrounding parts twice a day; linen is laid over the vaselin, and a mask made if the part affected be the face. The dressing is held in place with gauze bandages. In other respects treatment is symptomatic—antifebrin or antipyrin for severe headache, and the same remedies or quinine when the temperature rises above 100°; ice-bags to the head, laxatives, chloral, digitalis, and alcoholics, as indicated. The advantages of this method are: it can be used even upon the hairy scalp; smarting, burning and disagreeable odors are avoided; and the remedy is cheap.

Koester has employed the vaselin treatment in 130 cases and claims that the results are just as good as with some other remedies. He goes into an elaborate comparison of the vaselin treatment with other methods, considering in this comparison (1) the general infection, especially shown by the temperature; (2) the local process; (3) and the complications.

As regards the fever, his table shows that of 218 cases not less than 205, or more than ninety per cent., were free from fever after six days' treatment, and 158, or more than seventy per cent., were free from fever after four days. This is a better showing than followed treatment with lead-water, ichthyol, corrosive sublimate and vaselin, and iodine.

As regards the second consideration, the local process, it appears that in thirty-six cases treated with lead-water there was further extension in 25 per cent.; in fifty-seven cases treated locally with iodine, extension occurred in 10.5 per cent; in twenty cases treated with ichthyol-vaselin, extension occurred in 35 per cent.; in sixteen cases treated with sublimate-lanolin, extension occurred in 12.5 per cent.; while in 128 cases treated with vaselin alone the percentage of cases in which further extension occurred was 24. Koester argues against the apparently very favorable showing for the iodine treatment; he thinks extension occurred oftener than the notes indicate.

As regards the third consideration, the occurrence of complications, the results were as follows: In four cases not subjected to any treatment, phlegmonous processes recurred in 4 per cent.; in thirty-five cases treated with lead-water, in 8.5 per cent.; in fifty-six cases treated with iodine painting, in 7 per cent.; in twenty with ichthyol-vaselin, in 20 per cent.; in sixteen treated with sublimate-lanolin, in 6.5 per cent.; and in 130 cases treated with vaselin the percentage of cases in which phlegmonous processes recurred was 11.5.

The author discusses the reason for the utility of vaselin, but reaches no conclusion, except, of course, that vaselin has no antiseptic properties.

He believes that the chief thing in the treatment of erysipelas is the treatment of the general condition of the patient. So long as his symptoms are insignificant, only regu

lation of his diet and maintenance of his strength are demanded. If the symptoms become more violent, the fever high, if delirium occur, or the strength lessen, then appropriate remedies should be given, and the result is generally favorable.

Koester does not claim this conception as new. On the contrary, he asserts that Trousseau, Vierordt and Strümpell hold the same opinion.

THE USE OF OXYGEN IN DIABETES.

In *Il Policlinico* Ascoli reports that he has obtained good results by using oxygen inhalations in diabetes. To a man sixty years of age he gave large quantities of the gas each day for a little over three months. During this time the quantity of urine diminished, its specific gravity decreased, the quantity of sugar was reduced to a small proportion and in two months entirely disappeared. Three months later the sugar had not reappeared, although the patient had gone back to a diet of starch foods. He had also gained greatly in weight.—*Revue Internationale Médecine et de Chirurgie*, April, 1896.

THE TREATMENT OF THE INSANITY OF PUBESCENCE.

Elliott says, in the *Medical Record* of July 18, 1896, that in the insanity of pubescence one glance at our patient suffices to suggest the first principle of treatment. Nature has failed to make an adult of this youth chiefly because of the irritated and exhausted condition of his nervous system. Remove the irritation, if possible, and repair the exhaustion. Place the patient in quiet, pleasant, and healthful surroundings, with plenty of sunshine. Ascertain if there be any tight prepuce, or phimosis, or short frenum, or congenitally small meatus urinarius, or vesical stone; any malformed clitoris, or pruritus vulvæ, or leucorrhea, or cystitis, which by their irritation not only may cause profound reflex effects, but also keep the unfortunate youth's mind on the generative organs and thus provoke vicious habit. Remember that this habit may be carried on without manipulation and may exist notwithstanding lack of evidence on physical examination, failure of the attendant to observe it, and denial of the patient. One patient of the writer's, seventeen years old, whom he brought through a severe attack of insanity, in whom no evidence of this habit could be found, afterward boasted that she had masturbated all through her sickness. To stop the habit, the removal of all provocations and careful watching are of the most service. Continuous exhibition of the bromide of potash, with the hydrobromate of hyoscine in small doses, seems to be of some use in alleviating sexual irritation.

To repair the emaciation in the milder cases, or after acute symptoms have passed by, the hot-spray bath twice or three times a week claims first attention for its soothing and stimulating effect. Exercise in the open air, with tonics, especially strychnine and arsenic, in small doses before meals, cod-liver oil in never more than teaspoonful doses, generous diet at absolutely regular intervals and consisting almost entirely of milk, hominy, potatoes, and bread, with meat in small quantities, regulation of the bowels, not too much restriction of the patient's actions, and very few sedative or hypnotic doses, seem to be the chief elements of good treatment in these cases.

In delirious cases, and others refusing food and medicine, resort must be had at once to the stomach-tube. By this means not only may be administered medicine, but also that generous supply of food which is necessary to repair the extraordinary tissue-waste, and which of itself is often more calmative than any remedy. The staple articles to be given are milk and eggs, and occasionally broth or peptonoids. In cases in which the excitement is not very great, a pint of milk, with two eggs, and two teaspoonfuls of whiskey, if there is any tendency to the typhoid condition, given three or four times a day, will usually be found sufficient. If the excitement is very great, and there is excessive muscular activity, these amounts may be considerably increased. The author has given four pints of milk so thick that it would just pass through the tube, twelve eggs, one ounce of butter, and other necessary additions, to a patient every day for weeks, yet diarrhea was not set up, and only one or two feedings were rejected by vomiting. His patient lived and recovered her mind. In stuporous or cataleptic conditions the amounts must be much less, or fatal diarrhea may result. Ten drops of dilute hydrochloric acid added to each feeding will be of service. These patients should be kept in quiet surroundings but not left alone; they should be allowed to roam about practically unrestrained, encouraged to sleep at any time, and their noise should be put up with. If they go forty-eight hours absolutely

without sleep, one-eightieth of a grain of hydrobromate of hyoscine with one-fifth of a grain of morphine will usually secure a few hours' rest.

And here a word about the alkaloids of hyoscyamus. Hyoscyamus should not be used, hyoscine being more effectual and safer because less stupefying and depressing. Although not well borne by young or agitated persons, yet, if it becomes expedient to put an end to an attack of frenzy or to enforce sleep, this drug, either alone or in combination with morphine, is the best means at our disposal. For this purpose, at least one-sixtieth of a grain should be given hypodermically, smaller doses usually making the patient worse. Great dryness of the throat, leading the patient to believe he has been poisoned, headache, and dilatation of the pupils, muscular prostration, the production of hallucinations or increase in the intensity of those already in existence, and a general feeling of unrest, are some of the disagreeable after-effects of its first administration. A few patients, however, soon learn to like the sensation it produces, and in these cases it is a very valuable remedy, calming the convulsions, securing sleep, depressing the sexual organs, stimulating the kidneys, and certainly not interfering with the action of the stomach or bowels. Others, again, after its administration, pass rapidly into a sort of delirium with intense restlessness, weak and rapid pulse, flushing of the skin, and wide dilatation of the pupils; if sleep follows, it is short and unrefreshing, and the patient wakes in a worse condition than before. These effects, however, more rarely follow the hyoscine and morphine combination referred to above. Before resorting to such powerful medication to procure sleep, all the simpler means should be tried. A hot bath, or a glass of hot milk to which has been added a tablespoonful of whiskey, sometimes proves effectual. The author thinks physicians often get too anxious about this matter and employ hypnotics which sometimes do more harm than the insomnia. Especially is the routine use of chloral to be condemned. In most cases natural sleep will come unbidden, unless in the meantime the physician yields to the temptation to give his patient some powerful sedative for the sake of somebody else. In the treatment of very many of these cases the highest skill is patience.

The term "insanity of pubescence" has been used in this paper to include the aggregate of pure insanities occurring in youth. Elliott points out the difficulty encountered in classifying these forms according to present methods, and expresses the conviction that there is no form of insanity so intrinsically connected with, or so essentially arising out of, the pubescence itself, as to be well named after it; he ventures the opinion that when alienists shall have discovered a rational basis of classification, very little of our present nomenclature will pass muster.

THE ELIMINATION BY THE STOMACH OF MEDICINAL SUBSTANCES INTRODUCED BY MEANS OF HYPODERMIC OR RECTAL INJECTIONS.

BOUGERS, using vigorous dogs and examining the contents of their stomachs, obtained by vomiting or by lavage, finds that many more substances are eliminated by the gastric mucous membrane than has generally been supposed. Morphine, brucine, caffeine and quinine have thus been found; salicylic acid and antipyrin also, but not carbolic acid. It is, therefore, wise, in cases of poisoning by any of the alkaloids named, to see that the stomach is washed out to prevent repeated poisoning.—*Revue Internationale Médecine et de Chirurgie*, April, 1896.

TREATMENT OF ACUTE ARTICULAR, CHRONIC, AND MUSCULAR RHEUMATISM.

In the *American Practitioner and News* of July 11, 1896, BAKER describes the various plans for anti-rheumatic treatment. Blistering has few adherents at the present day, unless in those exasperating cases which have stubbornly resisted every other line of treatment. Ichthyol (25 to 100 per cent.) rubbed into the affected joints has seemed to relieve pain without causing irritation. The writer's preference is for a mixture of salol, ether, and collodion—of the first two, a drachm each, to an ounce of the latter—painted on the affected joints twice or oftener daily; this has certainly resulted in relief of pain, even if no permanent benefit ensued.

Since 1875 very little that is new or valuable regarding the treatment of the various grades of rheumatism has been presented. The salicylates and alkaline salts, aided by salol and phenacetin, continue to hold the leading place in the treatment of acute and subacute cases. Baker's own preference is for the sodium salicylate; he believes it is

not only more palatable and less liable to disorder the stomach, but also exerts a more prompt and decided action than salicylic acid. To an adult he administers ten to twenty grains every two to four hours until the desired effects are obtained, or until tinnitus is induced, after which he either lessens the dose or substitutes salicin. Given in this way, this drug will, in a great majority of cases, relieve pain after four to six doses, reduce fever, and cause the local swelling to subside in from sixteen to forty-eight hours. Oil of gaultheria, salol, salophen and allied products depend for their action upon the salicyl elements contained, and he has yet to see where either in safety, palatability or efficacy they are equal to the sodium salts. In the chronic and muscular forms of the disease the salicylates are not so reliable, but at the actively inflammatory periods and exacerbations they are not only useful, but indispensable. Quinine in the early stages is of benefit in controlling the pyrexia and thereby rendering the patient more comfortable, but has no specific action on the disease. Antipyrin, acetanilid and phenacetin will relieve pain and reduce fever, but have no action beyond their antipyretic and analgesic effects. Benzoic acid has been recommended, but even its adherents claim for it no superiority over the salicylates. Good results are claimed from an injection of carbolic acid (ten-per-cent.) into the painful joints; the writer has not tried this. Iodide of potassium, alone or in combination with the salicylates, is of undoubted benefit in the chronic forms. Quinine given with iodide of potassium will yield gratifying results in cases where the pain is worst at night. Colchicum, aconite and guaiacum are not much used, but Baker thinks that colchicum would be of unquestionable service in old chronic cases where the joint changes are allied in nature to those which take place in gout.

The general health of the patient should be carefully considered, and, if necessary, tonics, such as cod-liver oil, arsenic, iron, and strychnine, should be employed to increase the resisting power of the tissues to the disease.

In the treatment of muscular rheumatism the only indications are to counteract the diathetic condition and to relieve pain. Patients subject to muscular rheumatism should carefully observe the laws of hygiene. Drugs have no specific action upon the disease, nor do they shorten its duration. Salicylates produce not the slightest benefit unless the muscular trouble is complicated with joint affections. Massage if persevered in is of unquestionable service. For the relief of pain, the writer has seldom found it necessary to resort to opium.

In conclusion he states that in acute cases the salicylates will cure a larger number in fewer days than any other known mode of treatment; in chronic cases they are unquestionably serviceable, either alone or in combination with other drugs. While the salicylates neither prevent nor ameliorate the cardiac complication (except by lessening the number of days the patient is exposed), they certainly do not produce nor aggravate this complication. Under the salicylate treatment relapses are not so frequent as after other modes of treatment, provided the drug is not suspended too suddenly after the cessation of the pyrexia and articular symptoms. In uncomplicated myalgia the salicylates render little or no benefit. As from fifty to sixty per cent. of all cases of rheumatism are attended by cardiac complications, the proper protection of the heart is the most important indication to be fulfilled.

PREPARATIONS OF STROPHANTHUS.

In the *American Journal of Pharmacy* for July, 1896, Wood and Carter give the results of their studies as to the effects of strophanthin, with the object of determining whether this active principle represents in its action that of the crude drug. They think their experiments are sufficient to show that the commercial strophanthin, as put upon the market by manufacturers of the first class, is an extremely active substance. As long ago as 1888, Rothziegel and Koralzewski reported the results of the use of strophanthin in forty-four cases of disease: the influence of very small doses, 0.0002 to 0.0003 gramme, was distinctly perceptible in an increase of the force of the pulse in from five to ten minutes, but usually in cardiac cases the disappearance of the irregularity of the heart's action was not perceived until the second or third day of treatment; when there was dyspnea from cardiac disease, the difficulty in breathing disappeared very rapidly. No local irritation was, in their experience, produced by the hypodermic injections of as much as five decimilligrammes of the strophanthin. They ordinarily gave from one to three milligrammes in the twenty-four hours; in one case they gave five milligrammes for eight days without any bad

results. In two cases, however, the daily use of three milligrammes for two weeks caused reduction of the pulse-rate to 48 per minute, without any other accompanying symptoms. They reached the conclusion that strophanthin was a good substitute for tincture of strophanthus.

Wood's and Carter's experiments show that the activity of the strophanthin itself is much more marked in raising the arterial pressure than that of the extract, so that confirmation is afforded of the conclusion of Rothziegel and Koralzewski, *i.e.*, that strophanthin is a superior preparation of the drug.

The authors believe, therefore, that the Pharmacopœia should recognize the active principle of strophanthus and give appropriate tests for its purity.

ACUTE OTITIS MEDIA.

Dr. MUZZY, in the *New York Medical Journal* of July 4, 1896, concludes an article on this topic as follows:

In treatment, the first point is the pain. The more acute, however severe, the more sure will be the benefit from leeching, whether with the natural or artificial leech. The artificial is applied more speedily, draws more steadily, creates more surface irritation, and is comparatively clean. Next to leeching comes heat—dry, moist, or liquid: hot water injected slowly and gently; hot meal, sand, or the Japanese hot box. Try the dry form of heat first. The employment of laudanum or other anodynes is useless and wastes precious time. Cathartics as derivatives, mercurial or saline, should be used early. Many of the best authorities speak of puncture of the drum, a very valuable procedure: close watch should be kept, and this incision be made as soon as the inflammation bulges the membrane in a definite portion. But if your patient is a sensitive child, with an ear exquisitely tender, and with much swelling of the external canal, it will be far safer, and just as effective, to rely on leeches, heat, and cathartics. Beware of stabbing in the dark: don't forget the proximity of the internal carotid, and that it has been punctured in some cases. If in an adult you have punctured the drum, and matter only presents without extruding, inflation by the Politzer apparatus will assist to remove the pus.

After-treatment—that is, after disappearance of pain—consists in cleansing and the use of astringents, pure fifteen-volume peroxide, followed by a swab of alcohol, and dusting or even a heavy coating of powdered borax, but never a filling of the canal, as was recently much in vogue.

The inflammatory process may at any time spread to the mastoid cells. This is heralded by an increase in the severity of all the symptoms: the pain that had gone down or disappeared reasserts itself and spreads over the side of the head, and changes in character; the discharges may in a few hours disappear altogether; swelling over the mastoid takes place (though this is uncertain). Tenderness to light tapping or firm deep pressure by the finger is a safe but not infallible guide to indicate the presence of inflammation of the mastoid cells.

THE NON-MEDICAL TREATMENT OF PNEUMONIA IN CHILDREN.

The *New York Medical Journal* of April 11, 1896, gives an excellent editorial summary of the treatment of pneumonia in childhood, which it takes from the April number of that excellent journal, the *Archives of Pædiatrics*, which contains a notable series of six articles on the treatment of pneumonia in children, all by hospital physicians. The disease is treated of in its various forms, and the entire treatment receives consideration, but the *Journal* restricts itself in this summary to the accessory treatment, referring its readers to the *Archives* for what the authors have to say concerning the use of drugs.

The first article, entitled "The Method of Treating Pneumonia at St. Mary's Free Hospital for Children, New York," by Dr. George Montague Swift, is a paper read at the March meeting of the New York Clinical Society. Dr. Swift says that cases in which the physical signs are those of bronchitis, but in which the children appear unusually sick and have a temperature ranging above 102.5° in the axilla or in the groin, are regarded as probably cases of broncho-pneumonia and are treated accordingly. The plan in the treatment of these cases is to put the children in a room warmed to 75° F. or above, to keep a kettle of water boiling in the room, and on the kettle to keep a vessel of beechwood creosote or pine-needle oil, care being taken that the creosote does not boil down and become too pungent. The combination of warmth, steam, and evaporating creosote makes a soft, agreeable atmosphere which is most soothing to the inflamed and irritated bronchial mucous membrane. A child which has been coughing violently and frequently, says Dr. Swift, when

placed in such surroundings quiets down and coughs but rarely. One seldom needs cough syrups or expectorants in such an environment. The children with lobar pneumonia are kept in the well lighted, well ventilated wards of the hospital; some do better if they are removed to such a warm, moist atmosphere as was mentioned in connection with broncho-pneumonia. The oil-skin jacket is no longer used, but flaxseed poultices are applied for relief of pain. The use of an ice-bag for the same purpose has not as yet become common; in the cases in which it has been employed the result has been satisfactory.

In the second article, on "The Treatment of Pneumonia in the Babies' Hospital, New York," Dr. L. Emmett Holt says the pneumonia patients are kept in a ward by themselves, with never less than 1000 and usually 1200 cubic feet of air allowed to each bed. The temperature of the ward is kept as nearly as possible at 70° F., and, in addition to as good ventilation as possible, the children are removed from the ward at least once a day to allow a thorough airing. Great attention is given to the feeding of these infants, as experience has shown that the worst thing to be feared is the slow failure of nutrition from disturbances of digestion, with vomiting or diarrhea, but sometimes occurring without either. The food is always considerably diluted, although the regular hours of feeding are maintained. Water is given freely between feedings, usually combined with stimulants. For the youngest infants, partly peptonized milk is the chief reliance. It has been found much easier to prevent disturbances of digestion by careful feeding at the outset than to control them when they have occurred. In connection with feeding, close attention is given to the bowels, particularly to avoid distention of the colon with gas, which is often found to produce attacks of cyanosis and sometimes even convulsions from the pressure upon the lungs. Wherever there is a disposition to much fermentation in the colon, the bowel is emptied once a day by irrigation. The general plan of treatment is to use as few drugs as possible, reserving the stomach for food and stimulants and relying upon external measures or applications to control special symptoms. Much reliance is placed upon counter-irritation and inhalations. Counter-irritation is made with a paste of one part of mustard and six parts of flour, which is made to encircle the chest. It is left on only long enough to redden the skin—*i.e.*, five or six minutes—and the application is repeated from three to eight times a day, according to circumstances. It has been found particularly useful where the bronchitic element is prominent. Poultices have been practically discarded. Inhalations are used systematically in all cases, usually every three or four hours. For this purpose the child is placed in a closed tent into which steam is introduced from a croup kettle. The cases of lobar pneumonia are managed on much the same general plan, but counter-irritation is not used unless there is much pleurisy.

The third article, on "The Treatment of Pneumonia in the Children's Hospital, Philadelphia," is by Dr. J. P. Crozer Griffith. He tells us that every patient with pneumonia receives a warm tub-bath at the outset, if the general condition permits of it. If not, he is sponged. He is then confined absolutely to bed. Circumstances do not allow the pneumonic children with meningitis symptoms to be isolated, as would be desirable for the sake of mental rest; consequently all the cases, with occasional exceptions, are treated in the general wards. On the theory that croupous pneumonia, and probably broncho-pneumonia as well, is an infectious disease, no abortive or specific plan of treatment is attempted. Fever of moderate degree is not looked upon as of special import in pneumonia. Should it reach 104° or over, sponging with water of 70° to 80° is often employed, or a warm tub-bath is given. If the temperature of the child is still higher, or the means used do not prove effectual, the temperature of the water is reduced, or a cool tub-bath is given, but this is seldom necessary. Dr. Griffith's own feeling is that the fever *per se* can generally be disregarded, and it is rather the nervous symptoms which may accompany it that require treatment. Should great restlessness, insomnia, delirium, or convulsive movements appear to depend on the existence of fever, he endeavors to reduce this, independently of its degree. He has found that when the respiration is becoming much embarrassed, the heart failing, and the general strength waning, as it is especially apt to do in broncho-pneumonia, a plunge for from one to three minutes into a bath of 103° to 105° will often rouse the failing powers in a remarkable manner. In the use of the cotton jacket the practice differs. His colleagues constantly employ it. He formerly did, but does so no longer. He has never been able to see that it did any good or rendered the child more comfortable, but

appeared to make it less so. To employ it to prevent "taking cold" seems to him irrational. For the same reason, he says, we should swathe the entire body in cotton, for it is not the part exposed to chilling which suffers. Jacket poultices are only occasionally used by any of the staff, and by some not at all. When there is much dyspnea or pain, a hot light poultice sometimes gives great relief, but Dr. Griffith thinks that the indication for it seldom arises. Counter-irritation is used occasionally, oftenest in the form of turpentine stupes to relieve pain. Dr. Griffith is in the habit of employing friction with turpentine also, or, preferably, with amber oil, in some cases of broncho-pneumonia, to relieve the attendant bronchitis, provided the rubbing does not exhaust the child.

In the fourth article, entitled "The Treatment of Pneumonia in the Children's Hospital, Boston," by Dr. E. M. Buckingham, we learn that pneumonia patients are placed in the open wards with other patients, unless there is some special reason to the contrary. They therefore have a freer air than can always be secured in small rooms. Great care is taken to keep the air fresh and comfortably warmed, and in winter there is generally an open fire burning in the ward. As a rule the medical wards are somewhat quieter than the surgical wards, in which last there are less likely to be children who can be injured by noise. Patients are supplied with light but warm clothing. Dr. Buckingham does not know that he ever saw a poultice used in the hospital, and the use of the cotton-wool jacket is not at all common. Perhaps of late years it has not been used at all. Care is habitually taken that the child shall have food suited to its age and condition. With a high temperature the food is probably always liquid, and is commonly milk, either clear or variously modified.

From the fifth article, on "The Treatment of Pneumonia in the New York Foundling Hospital," by Dr. W. P. Northrup, we learn that in broncho-pneumonia of moderate extent and not following measles, whooping-cough, diphtheria, or influenza, the treatment is mostly symptomatic. For pain, localized, intermittent poulticing is employed. The poultice is made of English mustard mixed with cold water, one part, stirred into boiled flaxseed, three or four parts. The poultice is made up thin and large enough to cover the whole back of the thorax or the whole front or either side, as may be desired. This is kept on till the skin is well reddened. The poultice is then slipped out and a hot dry flannel is slipped under the clothes (or padded vest) to replace it. High temperature which manifests itself in cerebral symptoms —such as stupor, delirium, or great restlessness—not so much reliance being placed upon the thermometer as upon the symptom, is to be relieved by baths. Sponging with warm water and alcohol, followed by fanning, cools the skin well. Immersion in water at 90° for from seven to fifteen minutes, with constant rubbing, is also employed. In all cases attention is paid to keeping the feet warm. In pleuro-pneumonia, counter-irritation is employed to clear up pleural dullness, iodine being applied to a point just short of blistering.

The final article of the series, by Dr. Samuel S. Adams, is entitled "The Treatment of Pneumonia in the Children's Hospital, Washington, D. C." In croupous pneumonia, he says, absolute rest in bed is enjoined and great discretion is exercised in disturbing the patient for physical examinations. Frequent examinations of the chest are avoided, thereby saving extra labor to the overworked heart. If the pneumonic area is mapped out at first, and there is no reason to believe the inflammation has extended, nothing is said to be gained by overzealous investigations; on the contrary, change of posture for purposes of auscultation and percussion will frequently tax the patient's strength and may induce syncope. The diet is restricted to milk or animal broths in suitable quantities, and food is given every two hours during the day and every three hours at night. Cool water is also given at frequent intervals, but cracked ice is forbidden. The cotton jacket, with or without oiled silk, is worn throughout the attack. If there is acute pain with surface congestion, dry cups are applied over the inflamed area, followed by hot poultices and a jacket. The management of the fever depends very much upon its nervous manifestations. If the temperature does not exceed 104° F., with a daily range of one or two degrees, and there are no evidences of cerebral irritation, no measures are taken to reduce it; but if it remains continuously high and is attended with delirium or coma, Dr. Adams depends upon frequent sponging with alcohol and tepid water, or the graduated cold bath. Neither he nor his colleague has used the cold pack or the ice poultice. In some cases, he says, the graduated bath alone keeps the temperature within safe limits, con-

trols the delirium, and stimulates the heart. In broncho-pneumonia, the general plan of treatment is much the same; most cases are so slight as to call for little more than rest in bed, a liquid diet, and the cotton jacket. If the inflammation extends to considerable areas, more active measures are pursued. Counter-irritation is produced by mustard pastes, turpentine stupes, or camphorated oil applied to the chest, but never to the extent of blistering. Hot flaxseed-meal poultices are indicated when the pulmonary congestion is intense or general. In hypostatic pneumonia, frequent changes of posture enter into the treatment.

TOO MUCH AND TOO LITTLE HAIR.

JACKSON (*Medical News*, July 11, 1896) states that if there is any scaling or crusting on the scalp showing the presence of a pityriasis or seborrhea, our first duty is to deal with it. Do not make the mistake of prescribing cantharides at once because there is falling of the hair. To some physicians, falling of the hair always suggests cantharides, just as to other physicians any skin trouble suggests arsenic. If there is much crusting, it is well to soak the scalp over night in sweet oil, with two per cent. of salicylic acid, and to wash the hair and scalp the following morning. Then in these cases, or without the preliminary soaking in other cases, apply the chosen remedial agent. There are many who prefer resorcin, three to five per cent. in alcohol and water. The writer has tried this, both on himself and on his patients, and does not like it. It is, in his opinion, only fitted for those cases in which there is an oily seborrhea present. In the other forms it is apt to prove too drying to the scalp, and to increase the itching. If one tries to use a slightly oily fluid preparation of this or other drug, it is not much better. In his experience, though fluid preparations are easier to apply, they are not as much under control as pomades, and are prone to make the hair stringy and generally disagreeable.

After making trial of a great many different drugs and combinations in the treatment of the scalp, he has settled down to two formulas, namely: Sulphur cream, and Bronson's ointment. These give him such satisfaction that he employs the one or the other in the great majority of his cases of alopecia pityroides. His preference is for the sulphur cream. This is composed of:

℞ Ceræ albæ, ʒ vij;
Ol. petrolate, ʒ v;
Aquæ rosæ, ʒ iiss;
Sodæ biborat., gr. xxxvj;
Sulphur, ʒ vij.
Mix.

This he uses whenever he can. As after a time there is a slight odor of sulphur about the head of one using this preparation, it is not well to prescribe it for physicians or teachers, or those following any pursuit in which others are liable to detect such an odor. In such cases, and in those in which sulphur does not agree, Bronson's ointment is an elegant and efficient substitute. It is composed as follows:

℞ Hydrarg. ammon., ℈ j–ij;
Hydrarg. chlor. mitis, ℈ ij–iv;
Vaselin, ʒ j.
Mix.

It is frequently said that ointments are objectionable and that patients will not use them because they make the hair so greasy. That is quite true if one uses a thick ointment and uses it too freely. But if one of the ointments here given is used, and the patient be instructed to dip the end of the finger lightly into the ointment and then to rub the small particle of ointment thus taken thoroughly into the scalp, and not to smear it on the hair, there will be no complaint. It is always best to have the ointment put on by a second person, but if this is impracticable the patient must be told to lay the hair in a part and to rub the ointment into the part, and so go over the scalp. Of course this takes time, but it need not be done every day. After the ointment is applied, the hair is to be brushed to spread the ointment still more. The application is to be repeated once a day, every other day, or only once or twice a week, according to the nature of the case. It is remarkable how much more comfortable the scalp feels after the use of one of the ointments. Persistently used, the seborrhea will be cured in most cases. It must be borne in mind that it will probably relapse, and the patient should be so told, and instructed to keep by him the ointment so that he may attack the disease as soon as it appears.

The other diseases of the scalp that tend to produce baldness are so few that the writer does not speak of them.

Apart from the treatment of the disease of the scalp that may be present, he believes there is but one other remedy worthy to be spoken of, and that is massage. It is absurd to use so-called "hair tonics," which, in most

instances, are but more or less strong solutions of cantharides. If we use this irritant strong enough to cause anything but the most fugitive effect on the scalp, we are apt to set up inflammation. And if we use weak solutions and produce only a slight and fugitive irritation, what good is it? Vaunted hair-tonics make their reputations very largely in cases of transient fall of the hair after fevers, and in women, in whom the hair is apt to fall out and to grow again. Most of these cases in time would regain the hair without any so-called "tonic." But a certain amount of good is done by the tonics in keeping the scalp clean, and it is probable that the rubbing of them into the scalp acts as massage does. In cases in which the hair is really falling out in a vicious way, and in most cases of premature baldness in men, they are, in the writer's judgment and experience, of little value.

Massage, on the other hand, is the model method for increasing the nutrition of the hair. It does this by increasing the flow of blood, not only in the superficial vessels but also in the deep ones. We know that the hair papillæ receive their blood-supply from the deep blood-vessels that give off little arterial twigs to them. If now we increase the amount of blood flowing through the deep vessels, we also encourage the blood-supply to the papillæ, and so stimulate the growth of hair. We also accomplish another important thing, which is the loosening of the scalp. In men who are growing bald you will find that the scalp becomes progressively more and more drawn down upon the underlying bones. An atrophy of the skin is in progress. Now the application of all the local stimulants in the world will not cause the scalp to loosen. But massage will, and this very thing will greatly aid us in our endeavor to get the hair to grow. It may not cause new hair to grow, and it may not permanently stop the progress of the atrophy, but it will at least stay its onward course, and in so much delay the appearance of baldness. Believing that this reasoning is right, the writer long ago adopted massage as the essential part of the treatment of all cases of loss of hair that were not evidently and without doubt due to some passing and readily curable disease of the scalp. In his own practice he makes use of a skilled operator when the patient can afford to employ one. Otherwise he directs him to pinch up and roll his scalp between the fingers of his two hands. Happily, theory and practice run together in this matter, and the writer has had the satisfaction of seeing a number of cases greatly improved by the use of massage.

EFFECTS OF ATROPINE ON RESPIRATION.

UNVERRICHT (*Berliner Klin. Woch.*, June 15 and 22, 1896) draws attention to the harmful effects of atropine upon the respiration. He observes that the results of treatment by antagonists, such as morphine poisoning by atropine, have been only moderate. It is incorrect to assume that the respiration is improved because it becomes more rapid. The author's investigations have shown that there is no antagonism between morphine and atropine as far as the respiration is concerned. Atropine can produce Cheyne-Stokes breathing, and an agent which can call forth this phenomenon cannot be looked upon as a respiratory stimulant. Both morphine and atropine can produce in man breathing of the Cheyne-Stokes type. Orlowski has made abundant experiments in the author's laboratory upon the action of atropine on the respiratory centres. Dogs can bear doses of atropine which the human subject cannot. From the experiments it is shown that after the first injection of atropine the volume of the breathing is diminished, and that a further diminution is noted after a second injection. Eventually the volume may be increased just before general convulsions show the exhaustion of the nervous centres. Thus this increase is a manifestation occurring shortly before death. The frequency of the respiration showed generally a striking constancy. When increase in the volume of the breathing occurs, this can only be due to alteration in the depth of the breathing.

The author then relates his investigations into three cases of atropine poisoning. All three cases recovered, and the only symptom which caused any anxiety was the severe disturbance of the mechanism of respiration. These cases show how little atropine can be looked upon as a respiratory stimulant. In one case one centigramme of atropine sufficed to produce severe respiratory difficulty. The objection that smaller doses, of two to four milligrammes, act favorably on the respiratory centres, is theoretical and not proved. The author refers to recorded cases of atropine poisoning in which severe respiratory disturbance had been produced. He concludes that atropine is not a respiratory stim-

ulant, that even in small doses it produces an unfavorable action on the respiratory centres, and that in severe cases of morphine poisoning it is not to be recommended.—*British Medical Journal*, July 11, 1896.

ACETANILID AS A SURGICAL DRESSING.

WIBLE, of Munhall, Penn., writes of this use of acetanilid in the *Pittsburgh Medical Review* for May, 1896. The author's experience with the drug has been principally in the different classes of wounds, burns and scalds, and amputations, and he has found it not only equal, but superior in every respect, to iodoform. Dr. Allen, surgeon to the Samaritan Hospital, Philadelphia, says that acetanilid locally is like quinine internally, good for almost anything. It can be applied topically in powder; in ointment, using anhydrous wool fat or petrolatum molle as its base, in the strength of from five to sixty grains to the ounce of base; in solution in alcohol, in which form it is conveniently used in erythematous conditions of the skin; and also in the form of gauze, which is made in the same manner as iodoform and bichloride gauzes, and used to dress, pack, or drain wounds and sinuses. When used in the powder form, it should be finely rubbed in a mortar; this will give it more body, and it will then better cover and adhere to a wound.

It also has some hemostatic properties, is strongly antiseptic, desiccant, anesthetic, and analgesic.

When applied to a fresh wound, in powder form, it will combine with the wound secretions and form a thin scab, under which repair rapidly progresses. The slight burning sensation caused by the powder when applied to a wound ceases in a very brief time, and is then succeeded by its anesthetic and analgesic effect.

The powder does not adhere, or cause the gauze dressings to adhere, so tenaciously as iodoform does; but if there has been much secretion of blood or serum from the wound, and it dries thereon, thus causing the dressings to adhere, they can readily be loosened by applying alcohol, which dissolves the acetanilid, allowing the dressings to fall off, which they do in the majority of instances immediately upon removal of the bandage and without the application of water or alcohol.

Acetanilid has many advantages over iodoform, and no disadvantages whatever. Nothing derogatory has been said against its use, except its poisonous effects when absorbed through a wound; but this will never occur if a little common sense is practiced. Only where an extensive denuded surface is exposed, as particularly in burns and scalds, is there liability to the supervention of toxic symptoms, and when such cases present themselves the only precaution necessary is to dust the acetanilid lightly, if used in the powder form, and if used with an oily base to use a less percentage of acetanilid than would be advisable in a denuded surface of smaller extent.

Wible employed acetanilid ointment, thirty grains to the ounce of base, to dress a child one year old, who had sustained scalds of the entire left arm and shoulder, extending up to the chin and down over the chest to the waist. The child was dressed once every twenty-four hours. No toxic symptoms developed, and the application of the ointment evidently was painless and soothing, for the little patient would hold out its arm to have the dressings applied.

Rook, of Quincy, Ill., reports two cases of acetanilid poisoning, one terminating fatally, and hence concludes that the drug is a dangerous topical application in new-born infants; but he used it to excess. Thus, to a babe four days old, suffering with an erythematous inflammation of the skin of the nates, thighs, and groins, he applied four times during an afternoon a powder composed of equal parts of acetanilid and bismuth subnitrate; on the following morning the babe was found cyanosed, and shortly afterwards died. That the babe died from the absorption of the acetanilid cannot well be gainsaid, but who would think of applying any active remedy almost every hour to a babe not a hundred hours old? This physician's other case was similar to the one mentioned: the babe was but two days old; one application was made; the following morning this babe was also deeply cyanosed; the application was stopped, and in twenty-four hours full recovery from the toxic effects occurred.

In the January number of the *Yale Medical Journal* is reported a case: A girl, aged eighteen years, was suffering from a suppurating ulcer, resulting from a burn of a large part of the hand. Powdered acetanilid was applied every four hours for twenty-four hours, when symptoms of cyanosis occurred. The drug was immediately discontinued, and in twelve hours all symptoms disappeared. Dressing the wound every four hours was uncalled-for and unnecessary. By dressing

it once in twenty-four hours the desired result would have been obtained, namely, the prevention of pus-formation, and the unfortunate toxic effects would not have supervened.

Dr. Wood, of the United States Army, in a paper read before the Surgical Section of the San Francisco meeting of the American Medical Association, recommended acetanilid as a cheap, non-irritating, non-poisonous, and inodorous surgical dressing. The cost is about one-fifth that of iodoform.

It acts very satisfactorily as a desiccant in abrasions, burns, and scalds, preventing serous oozing, which is annoying in the way of soiling the dressings, etc.

If a wound, traumatic or surgical, be dressed first with strict regard to antiseptic precautions and then with acetanilid as a dusting powder, acetanilid gauze, absorbent cotton, and roller bandage, there will remain afterward a perfectly dry and rapidly healing wound. The author has used it in retarded healing of the umbilicus, in which there is usually more or less serous oozing, with very satisfactory results. Dr. Wells, of Philadelphia, reports that he is much pleased with the action of acetanilid, combined with starch powder, for the same condition.

Upon chancroids the effect of acetanilid is probably more gratifying to both physician and patient than any other substance. The wound-secretion and pus-formation are almost immediately checked, and healing rapidly progresses under a dry scab in from one to seven days. The method of application is simply rubbing the dry powder into the ulcers. Patients are especially thankful when treated thus, on account of the entire absence of odor and the ease and simplicity of the method of treatment.

Crush-wounds of the extremities, where dust, dirt and grease are ground into the lacerated tissues, and it is impossible to wash out all the foreign matter with antiseptic solutions, have been found by the author to heal generally without suppuration when dressed with acetanilid.

PYLEPHLEBITIS SUPPURATIVA.

MYNTER, after reporting a case of suppurative pylephlebitis complicating operation in a case of gangrenous appendicitis, thus quotes from Ziemssen (*International Journal of Surgery*, April, 1896):

Thrombosis of the portal system is of comparatively frequent occurrence, dependent upon marasmus with weak heart, or compression of the portal vein or its branches in the liver, as in cirrhosis, or tumors or cicatricial retraction of new tissue. Textural changes in the wall of the vein itself are necessary in order to produce phlebitis, and this disease is much more rarely met with. It is, therefore, generally secondary to suppurating processes in the abdomen, an inflammation spreading to the portal vein or its branches and producing purulent infiltration in the wall, resulting in thrombosis, the thrombi then undergoing purulent softening and the vena porta appearing filled with pus.

The etiology of this rare disease is well known. It may occur in any age, even in earliest childhood, when it may start in the umbilical vein after ligation of the navel, due either to trauma or infection. Most cases, however, depend upon ulcerative processes around the radicles of the portal vein, which involve the wall of the vein, produce phlebitis and consecutive thrombosis, which spreads upwards along the vein or by embolus, in either case producing a thrombo-embolic pyemia of the portal system.

Appendicitis forms the most frequent cause, through infection of a mesenteric vein, when the mesentery or omentum is adherent and agglutinated to the gangrenous appendix. The cause may, however, be found in gastric and intestinal ulcers, in phlebitis in the hemorrhoidal veins after wounds operations or ulcerations in the rectum, or after dysentery, in abscesses in the spleen, in abscesses due to suppurating glands in the mesentery, or localized peritonitis around the hepatico-duodenal ligament. The liver, too, may be the starting-point, although it, as a rule, is attacked secondarily. The disease may then be due to suppuration dependent upon gall-stones or echinococcus, the liver branches and the trunk being primarily affected, while the radicles are normal.

The symptoms of pylethrombosis depend principally upon the occlusion of the portal vein, and consist in rapidly occurring ascites, swelling of the spleen, watery diarrhea mixed with blood, and dilatation of subcutaneous veins, the so-called "caput Medusa." The collateral circulation becomes established between the portal vein and the superior and inferior vena cava in a roundabout way. In the liver we find a direct communication between small branches of the portal and hepatic veins—*i.e.*, accessory portal veins. The superior gastric vein communicates with the inferior esophageal vein, and through that

with the intercostal vein and vena azygos, and with the superior and inferior diaphragmatic veins to the superior and inferior vena cava.

Another roundabout way is through the hemorrhoidal plexus. The superior hemorrhoidal vein empties its blood into the inferior mesenteric vein, which is a branch of the vena porta, but communicates through the hemorrhoidal plexus with the inferior hemorrhoidal vein, which is a branch of the internal pudendal and hypogastric veins and, through them, of the inferior vena cava.

The most important communication, however, takes place through the venæ parumbilicales, originating from the external iliac and epigastric veins in pairs, uniting near the umbilicus, and receiving branches from the gall-bladder; they ascend to the round ligament, receiving branches from the peritoneum and rectus muscles, and empty into the portal vein. The "Medusa head" may form, when the portal circulation in the liver is obstructed, but the trunk is permeable, and the blood from the portal vein passes then through the umbilicus into the veins of the anterior abdominal wall.

The symptoms of pylephlebitis depend less upon occlusion of the portal system than upon septic and thrombo-pyemic processes preceded by the symptoms of the original disease which caused the phlebitis.

Pain is always present, starting in the ileocecal region when appendicitis is the primary cause, or in the region of the spleen, epigastrium or hypochondrium when the primary cause is found there. The hepatic region is always painful. The pain is in the beginning probably due to inflammatory infiltration of the wall of the diseased vein, later to diffuse peritonitis. The liver is moderately enlarged, according to the size of the abscesses; when these are wanting, the liver may be normal in size. The spleen is enlarged by stasis from occlusion of the splenic vein, except in case of profuse hemorrhage from the stomach, when it may remain small.

Icterus is not a constant symptom. It may depend upon compression of the hepatic bile-ducts by the thickened branches of the portal vein.

Icterus is then imperfect, the urine containing bile-pigment, but the feces not being whitish. This is a true hepatogenic icterus. In other cases the icterus may be hematogenic, dependent upon extensive destruction of red blood-corpuscles and free biliary pigment in the blood, but the urine remains clear and the stools are not discolored.

Nausea and vomiting of a dark greenish material, accompanied with diarrhea mixed with blood, belong to the early symptoms. Profuse hemorrhage from stasis occurred in the writer's case, but is not mentioned as a frequent symptom.

Peritonitis develops gradually, although it at first is localized. The abdomen becomes distended, and respiration becomes costal; secretion of urine diminishes or ceases altogether.

The fever is of the usual septic type, with irregularly appearing chills, high temperature, profuse perspiration, and nocturnal exacerbations, and is accompanied with rapid emaciation. Delirium appears, and the patient dies in coma in a few days or after a more protracted illness of several weeks' duration, pyemic metastases in brain, lung, joints, etc., often preceding death.

The diagnosis depends upon the appearance of a number of symptoms in a distinct order, preceded by appendicitis, ulcer of the stomach, or any other of the etiological factors. These symptoms are, as mentioned, pain, violent chill, painful enlargement of the liver and spleen, icterus, bloody vomiting, and peritonitis. The more of these symptoms there are present, the more probable is the diagnosis.

The prognosis is absolutely fatal, and no treatment has been of any avail. The writer, however, suggests careful examination of the omentum in all cases of gangrenous appendicitis. If we find it agglutinated to the appendix or forming a limiting wall of an abscess, it would be in order to remove the omentum in sections, if we should find the veins stiff from phlebitis and thrombosis and the omentum infiltrated. We may, perhaps, thus be able to remove the infected veins before larger branches have become invaded.

SUCCESSFUL REMOVAL OF A PIECE OF WOOD IMBEDDED WITHIN THE BRAIN FOR THIRTY-TWO YEARS WITHOUT IMPAIRMENT OF THE CEREBRAL FUNCTIONS.

EVANS (*International Journal of Surgery*, April, 1896) reports a most interesting case with the above title.

The patient was a male, aged fifty-seven years. Served in the war of 1862 in the capacity of a gunner to one of the field pieces. The gun had been run up nearly to the top of a small hill upon which grew some scrubby

pines. The enemy let go a full charge of grape and canister while he was in this position, and he was struck, with what he and the surgeon at the time supposed to be a bullet, on the left side of the face, a little below and to the left of the left eye, making an ugly-looking wound. This was immediately closed by the field surgeon in charge, and the patient sent to the rear. No inconvenience was experienced from this wound aside from some slight soreness, and at the end of a week he was able to report for duty, and continued to serve until the expiration of his enlistment. On being discharged he took up farming, working hard for many years.

A year previous to consulting the writer, while stowing lumber in the hold of a barge, a plank slipped and fell endwise down the hatch, striking him on the face precisely over the region where he was formerly wounded. Slight pain and swelling followed, and in the course of two weeks there appeared an abscess, which was duly opened. After several weeks' treatment, and as the discharge of pus continued, he passed under the care of a surgeon who diagnosed cancer and treated with caustic paste.

Finally he came under the care of Dr. Z. H. Evans, when the error of diagnosis was at once recognized. A probe was introduced and soon came in direct contact with dead and detached bone. Now with the free use of cocaine Dr. Evans scraped away with a sharp spoon all of this material, exposing and opening up the posterior ethmoidal cells, as well as the floor of the skull. The dura was then exposed, and found much thickened. He now exerted some slight pressure with the tip of his finger on the presenting portion of the brain, which caused the discharge of a little bloody pus through a small cerebral opening. A small probe, passed into this opening some distance, came in contact with a hard substance. Thinking he had a bullet to deal with, he took a pair of Pean's forceps, passed them into this opening, and laid hold of this foreign body and drew it out. It proved to be a piece of pine wood measuring 1¼ inches long, one-third of an inch wide, and one-third of an inch in thickness. On removing this body the hemorrhage was profuse, and could only be controlled by packing the opening in the brain with gauze. This tampon was allowed to remain *in situ* for twenty-four hours, when it was removed and the parts washed out with plain clean water. A small piece of gauze was inserted into the wound for drainage. This method of treatment was carried on for several days, and finally the opening in the brain contracted and pus ceased to discharge. The soft parts were now brought together by means of adhesive plaster, and within ten days the external wound had closed.

Thirteen days after the removal of the wood the patient, while sitting in a chair, was seized with paralysis affecting the same side of the body from which it had been removed. The paralysis was not complete; he could walk by dragging his leg along, while his arm would swing by his side. His intellect was not disturbed; speech was somewhat thickened, and he found it a difficult matter to express himself.

He passed from observation shortly after, but Dr. Evans has heard that the patient has fully recovered the use of his limbs and is about to engage in his former work.

RADICAL CURE OF HERNIA.

BISHOP (*Medical Chronicle*, June, 1896) states that the incurability of hernia in adults by mechanical contrivances or trusses, however ingenious, makes one wonder that "radical cure by operation" is not more frequently resorted to. After a brief *résumé* of the progress that has been made in the technique of operations for the radical cure of hernia, and the results obtained, he says:

First, while return of the inguinal hernia is impossible, or nearly so, after Bassini's operation—since the inguinal canal as such has ceased to exist—there is no protection whatever against ventral hernia at the new point at which the cord makes its exit from the abdomen. Now, a relapse is a relapse, by whatever name the new hernia may be known. Second, there is a constant proportion between the size of the hernial opening to be occluded and the sac protruded through it, not only in its size but in its toughness and thickness. If, then, we only know how to utilize the sac, there is a means always ready and suitable to our hand. The question is, in what way can we proceed so as to obtain the utmost possible benefit to be derived from this structure?

What is it we wish to do? The central idea is to close the opening in the abdominal wall so far as to allow only the passage of the spermatic cord; not only the muscular wall, but more especially the aponeurotic and deep fibrous layers, which give the most efficient support to the abdominal contents.

This closure we wish to protect from forces acting from within—it is easy to protect it from forces acting from without—until it has become sufficiently firm. In the earliest stages of the uniting process the uniting medium is soft, plastic, and easily distensible. If it can be preserved from disturbance for six weeks it will have become tough and resistant, becoming more and more so as time elapses.

Moreover, even when the tissues have gained their utmost firmness, if a space is left for the passage of the cord the inner extremity of which is in a direct line with the outer, we are much in the condition that we were in before the hernia began. Can we, by any means, gain any further advantage, so as if possible to render the patient less liable to hernia than other men, now that we have the chance?

Macewen, after freeing the sac entirely up to the internal ring, doubles it upon itself in several folds, and, having made a gap for it between the parietal peritoneum and the transversalis muscle, places it there inside the muscular wall and over, but outside, the internal ring, so that not only is the wall thickened at this point, and the part which was the weakest is now rather the strongest, but the inner opening of the inguinal canal is bent at an angle, so that force from within no longer impinges upon it in a direct line with the space penetrating the abdominal wall, but in a direction more or less at a right-angle to this, and is thereby dissipated upon the rest of the muscular surroundings.

Of course, in his hands Macewen's method may be trusted to fulfill all these indications, but in the hands of those less practiced and skillful there is danger that the pad so formed may not lie immediately over the internal ring, and so a space be left on one side or the other, vitiating the whole proceeding and allowing of easy relapse.

To obviate this, the sac is freed, as Macewen frees it, up to the internal ring, and it has been found imperative that the outer wall of the canal be slit up, so that this ring may be well defined. The only case in which Bishop has known the sac to slough was one in which he had attempted to draw it upward through the undivided canal; it became bruised by its passage through the tough external ring. The sac is then inverted and drawn up by a bridle suture, so as to lie inside the peritoneal cavity and immediately over the ring like a convex boss on the inside. When this is done it is impossible that any portion of the ring shall be left unguarded.

Now, the muscular and aponeurotic layers are carefully united by interrupted silkworm-gut sutures, which are cut off short and buried. All loose tags or bruised and infiltrated connective tissue is cut away, leaving a perfectly clean wound, which is then accurately closed by horse-hair sutures.

But it is increasingly evident that success does not depend solely upon the operation chosen. In certain cases there is no sac to utilize, or the sac may be so injured during the earlier stages of the operation, especially in the process of freeing adherent omentum or gut, as to be useless; and then Ball's method, or even Barker's, may be necessary — there may be no alternative. Moreover, with all rationally devised and properly executed operations, successes have been obtained. Why is it, then, that so many relapses have also occurred, and do occur, so that, with many men, reference to "radical cure" only provokes a smile?

As long as any surgeon has his attention fixed on muscular exertion, strain, or accident, as the cause of hernia, he will be very apt to undervalue or miss altogether these other and more potent causes. The patient in bed is not being exposed to accident or muscular strain, and therefore need not fear these as causes of relapse until he goes about again. It is, therefore, only necessary to keep him in bed long enough, until the scar uniting his tissues is strong and firm enough, to ensure permanence to the surgeon's results; but should he suffer from chronic bronchitis, should he have a stricture, or well marked active piles, these will continue to act deleteriously, even directly after operation, or while he is convalescing, and when the lymph uniting the several surfaces is in its most plastic and yielding state. It may indeed be said that in ninety-nine out of a hundred cases where relapse takes place, the foundation of that relapse is laid in the first week after operation and by these causes.

It is, perhaps, hardly necessary to add that the occurrence of suppuration is fatal to success. In these aseptic days one almost takes primary union for granted, but the author has been unlucky enough to see suppuration in two of his cases, and in both there is a relapse at the point where pus was formed.

Bishop gives a list of forty-three patients operated upon. So far he has been fortunate enough to have had no death, nor does he think there should be any mortality in such cases. If a patient is suffering from any disease such as is likely to enhance the risk

materially, as, for example, diabetes, cardiac or renal trouble, a measure such as this would be out of court at once.

LAMINECTOMY FOR TUBERCULOUS DISEASE OF THE SPINE WITH PARALYSIS.

Mr. ANDERSON operated on a child, a fat, healthy-looking boy, aged nine, who had been suffering from tubercular disease of the spine for two years, with paraplegia of eighteen months. There was angular curvature in the upper dorsal region, the chief point of projection being at the third dorsal vertebra; the soft parts near the seat of disease were healthy. The paralysis affected the lower interossei, the abdominal muscles, and the lower extremities, leaving, however, control of the bladder and rectum; the breathing was almost entirely diaphragmatic; the sensation of the paralyzed parts was apparently unaffected, the boy's general health was good, and the functions other than those of locomotion were carried on normally. The patient had been under observation for nine months, and as no improvement in the paralytic symptoms had taken place during that time an operation was considered advisable. Mr. Anderson performed the operation in the usual manner, making a longitudinal mesial incision over the diseased vertebræ, peeling the muscular and other structures from the laminæ, and after full exposure these last were almost completely divided with a small saw close to the transverse processes on either side; the detachment was then completed with a bone forceps, and the detached laminæ were removed, exposing the membranes of the cord. The bleeding during the operation was very slight. The laminæ of the second, third, and fourth dorsal vertebræ were removed. Opposite the third dorsal a large quantity of purulent matter, partially solidified, was found overlying the dura mater, and a sinus was traced on the left side of the cord into the body of the vertebra. No sequestrum could be felt, but by means of a curette a quantity of pus, broken-down tuberculous matter and bone debris were removed. The sinus was then gently filled with iodoform, a drainage tube inserted down to the diseased body, the soft parts replaced, and the wound united with silkworm-gut sutures. Tho operation was well borne; the patient left the table in good condition. It was noticed after the removal of the laminæ that thoracic respiration, scarcely perceptible before the operation, was visibly increased.

Mr. Anderson remarked that the operation had been performed with varying success during the last few years for tuberculous caries with paralysis. It must be remembered, he said, that the operation is a severe one, and it should only be undertaken after long and patient watching, and in subjects whose general condition is fairly promising. In suitable cases he thought it hopeful, by relieving the cord from pressure of accumulated inflammatory products, and by allowing some treatment of the focus of disease at the time of operation and afterwards. The most difficult part of the operation is the detachment of the laminæ, since an injury to the dura mater, or even to the cord, may easily be inflicted, and the results may then be disastrous. The almost complete division of the laminæ by the saw renders the subsequent section by the bone forceps comparatively soft and easy, and the surgeon has only to take care in levering off the bone that no portion of the cut edge presses against the dura mater. In this, as in other cases, the spinal veins bled but little, and the very slight hemorrhage ceased spontaneously. It is, of course, undesirable to open the membranes.

A week after the operation the patient was in a good condition, with normal temperature and without any sign of spinal irritation; a slight spasmodic flexure of the right leg, noticed the day following the operation, subsided at the end of twenty-four hours. The respiration was still mainly abdominal. —*Medical Press and Circular*, June 10, 1896.

METHOD OF DISINFECTING THE BLOOD IN SERIOUS INFECTIOUS DISEASES.

The process to which Dr. HENRI BARRE has given the name "disintoxication of the blood" is derived from simultaneous employment of two therapeutic means already made use of in medicine: the one very ancient, bleeding; the other very modern, the intra-venous injection of artificial serum. The aim is to combat the phenomena of general intoxication; and purgatives, diuretics, stimulants, sedatives, etc., should first be given a fair trial—when these fail, "disintoxication" may be resorted to. The maladies most frequently calling for this measure are: uremia, eclampsia, diphtheria (when Roux's serum does not suffice), infectious pneumonia, capillary bron-

chitis, malignant icterus, general acute peritonitis, cerebro-spinal meningitis, typhoid fever, measles, smallpox, scarlet fever, puerperal fever, cerebral complications of rheumatism and gout, poisoning by alkaloids, extensive burns of the skin, etc.—in short, whenever the danger from general intoxication equals or surpasses that from actual lesions of the organs.

In all these diseases there is to be noted a considerable diminution, if not a complete cessation, of the urinary function, and the disintoxication of the blood has for its immediate purpose to eliminate artificially a certain quantity of toxins, and to help to achieve complete elimination by re-establishing the secretion of urine.

The necessary instruments consist essentially of two india-rubber tubes, terminating in needles of a diameter a little greater than that of a Pravaz syringe. The longer of these tubes (about 1½ meters) conducts into the veins of the arm the artificial serum, from a graduated vessel at a position more or less elevated in accordance with the degree of force required. The second tube (one meter long), of which the needle is inserted in a vein of the other arm, has its free end in a graduated vessel, and thus serves to extract blood.

The flow of the two liquids by this arrangement can be so regulated that no less serum flows in than blood flows out, and thus, the circulatory system being always equally full, arterial tension need not be diminished, as it is from ordinary bleeding.

The quantity of serum introduced and the quantity of diluted blood withdrawn may vary between 500 grammes and one liter for an adult, in accordance with the degree of intoxication.

As will be seen, this method differs materially from "washing the blood," which has been for some time applied by preference in cases of surgical infection. The difference consists mainly in the contemporaneity of the injection and the bleeding. This prevents any severe interference with the circulatory system, and allows, if death from intoxication seems imminent, the withdrawal of the greatest quantity of blood, and consequently disintoxication, with the least danger to the patient.

The exchange of liquids is made very quickly (in thirty to fifty minutes), so that no sharp reaction ensues; grave symptoms insensibly diminish, gradually disappear, and are followed soon by refreshing sleep. On waking, the patient desires to pass water. Sometimes sweating accompanies the re-establishment of urination, as in natural crises.

In the three cases (two of uremia, one of infectious pneumonia) in which Dr. Barre has applied his method — cases in which everything had proved useless and in which death appeared imminent—he obtained improvement as rapid as that just described. Not only did the most serious symptoms cease, but at the end of the urinary crisis they did not reappear, and the patient progressed steadily toward cure.

Dr. Barre expounds the following theory to explain the phenomena of the cure:

1. There is elimination of the excess of toxins, which constitute the immediate danger.

2. The effects continue because the bulk of blood is not diminished in volume in the system and does not need re-forming at the expense of the fluids of the economy, and, the arterial pressure not being diminished, no obstacle to diuresis is created.

3. Not only are toxins eliminated which appear to have an inhibitory action on the urinary action, but the toxins which remain become diluted and less powerful for evil.

4. As recent researches have proved, the alkaline salts have a favorable action on the bactericide powers of the blood, and the method thus provides the economy with a new means of fighting successfully against the microbes.

Dr. Barre believes the method will be found of enormous advantage in veterinary as well as human pathology.—*Medical Press and Circular*, June 10, 1896.

FRACTURE OF THE SKULL, WITH COMPLETE PARAPLEGIA.

LECLERE (*Deutsche Med. Woch.*, May 7, 1896) relates an interesting case of a man who sustained a compound depressed fracture of the skull by a body falling from a height vertically upon his head. He recovered consciousness within ten minutes of the injury. On admission, a wound was found over the skull, and a compound fracture with a triangular depression of bone. There was no injury to the vertebral column. There was a complete paraplegia, as well as a feeling of formication in the leg. Sensation was unimpaired. The knee-jerks were present. The arms and face were intact. As the patient's condition became worse, trephining

was performed four days later. The depression of bone was composed of three segments. The foremost fragment was removed, and a second one elevated, when an alarming hemorrhage occurred from the longitudinal sinus. Further operation was abandoned, and the wound was plugged. On the following day the third fragment was elevated. The surface of the brain looked edematous, and a considerable clot lay between the hemispheres. Power began to return in the legs almost at once after the second operation, and an hour later the patient could raise his legs from the bed, but the feet and toes remained paralyzed for a long time. In five weeks, attempts at standing and walking were made. Two months and a half after the accident the patient was able to walk to and from the hospital for electrical treatment. The gait still remained uncertain, but he was soon able to do some light work. The remarkable feature of the case was the complete paraplegia in the absence of any injury to the vertebral column. The motor centres for both legs were involved.—*British Medical Journal*, June 27, 1896.

CAUSATION AND TREATMENT OF MAMMARY ABSCESS.

The general practitioner is principally concerned with abscess of the breast as a very unwelcome accompaniment of the puerperal state. Since antiseptic midwifery has been taught and practiced, the belief is no longer entertained (except possibly by the remaining old fogies of the profession) that simple engorgement by milk is a sufficient cause of mammary abscess, and the well informed physician regards the occurrence of such abscess as a reflection on his skill and care as medical attendant—as, in fact, a complication often, if not always, to be avoided.

It is now known that abscess of the breast is the result of an infection, generally through a crack or abrasion of the nipple or areola. The most common agent is the staphylococcus, especially the *Staphylococcus aureus*. The vascularity of the breast during lactation, and the presence of an animal fluid (the milk), are favoring conditions, while any breach of surface about the nipple gives the microbe ready access; the infection is through the lymphatic channels. There is another possible source, alluded to by Dr. SHIELD in a late number of the *Lancet*—the entrance of organisms along the milk-ducts themselves. He refers to the fact now known among dermatologists, that organisms may enter the sebaceous glands of the skin and thus produce boils and pustules. Seeing that the breast is only a highly differentiated sebaceous gland, it would seem the same result might occur here—that is, that there might be infection of the breast through the nipple and milk-ducts. Chassaignac called the disease *canalicular intra-mammary abscess*. Boissard (quoted by Shield) speaks very positively of the invasion of the milk-ducts by streptococci and staphylococci, and terms the resulting suppurative inflammation *galactophoritis*. The branching nature of the abscesses along the milk-ducts seems especially to impress the writers upon galactophoritis. Shield thinks it always open to doubt in these cases that some breach of surface does not really exist, and although the experiments of Nocard who produced mammary abscesses by injecting tuberculous virus into the milk-ducts of a lactating goat place it beyond doubt that infection of the ducts is possible, this mode of infection certainly is not common. Shield affirms that for three years he has closely examined many cases of mammary inflammation and abscess without finding a single case where he could certainly attribute the abscess to infection through the milk-ducts themselves. The experiment has been tried of rubbing pus into the orifices of the milk-ducts of lactating animals, the breasts having previously been drained of milk; in none of the cases did any reaction or alteration occur.

With regard to the position and effects of purulent collections in the mammary gland, in some cases the suppuration is superficial—supra-mammary. Here the pus forms immediately beneath the skin of the areola. The majority of mammary abscesses are undoubtedly in the substance of the breast itself—intra-mammary. Great havoc is wrought by untreated suppuration of the breast. The abscess burrows irregularly so that numerous pockets and recesses are formed, and multiple "pointings" and sinuses ensue.

Statistics have been compiled showing the relative infrequency of acute mammary abscess at the present day in the great lying-in hospitals. Shield states that careful examination of the records of 2000 puerperal cases at the Queen Charlotte Lying-in Hospital has failed to disclose a single case of mammary abscess. Most of the patients were primiparæ, in whom the nipples are often badly developed, badly cared for, and frequently sore. The cause, he says, is not far to seek

in the precautions taken by the physicians to ensure the cleanliness of the nipples and of the infant's mouth. Acute mammary abscess is generally preventable by such simple precautions. Many cases are due to faulty development of the nipple; here much can be done in the way of prevention by the judicious use of the breast-pump, and by hardening, astringent lotions before parturition. The prevention of mammary abscess when threatened, by expression of milk and the use of an exhausting bottle, is favorably spoken of by Spencer and Beale, who also advocate the treatment of mammary abscess by opening with a trocar and cannula and applying the exhausting bottle to the aperture. Shield would hesitate to apply this method to deep-seated collections of pus with loculi in the substance of the gland. He also feels sure that the treatment of acute mammary abscess by the method of establishing a free opening anteriorly radiating from the nipple is essentially wrong. It leaves a scar in front of the breast and opens the purulent collection in a position the least suitable for drainage. As a consequence, many of these cases need several operations, until drainage-tubes are seen projecting through various openings and very unsightly scarring and deformity results, and the breast is afterwards functionally almost useless. His method is as follows: As soon as elasticity and deep fluctuation are evident, an incision is made radiating from the nipple just large enough to admit the index finger of the operator, and this is deepened until pus flows. The finger is now passed into the cavity and it will be brought fairly near the surface in a dependent position, and this is generally at the thoracic mammary junction. Sometimes the finger passes toward the axillary margin, and occasionally the cavity is so large that a stout bent probe must be used to indicate the deepest part of the abscess. In this situation, the gland being well raised by an assistant, a free opening is to be made, large enough to well evacuate the pus, and, the finger being now introduced through this, the inferior opening, the operator will be surprised to find that the pus has burrowed about, and is contained in loculi bounded by fibrous septa. It is especially noteworthy that in many cases quite a narrow channel towards the nipple connects the deep abscess with the more superficial collection of pus opened anteriorly, and it will then be clearly understood how inefficient is drainage in the practice of those who are content with a small incision anteriorly in these cases.

The remainder of the treatment is obvious: the cavity is well flushed out with an antiseptic solution, and a full-sized tube is introduced from below (this must be confined by a silk thread). The opening made near the nipple is closed with fine horse-hair and painted with collodion. It readily unites, with only a faint scar, and the free drainage prevents the possibility of the re-collection of pus and a necessity for further operation. The tube, a large one, can be left in the cavity as long as is needful, and is slowly shortened and withdrawn. The wound heals with a larger scar, but this is completely hidden by the position and volume of the gland above.—*Boston Medical and Surgical Journal*, June 11, 1896.

LAPAROTOMY IN THE TREATMENT OF AFFECTIONS OF THE GALL-BLADDER.

KEHR reports 206 laparotomies practiced for the treatment of affections of the gall-bladder (*La Médecine Moderne*, No. 49, 1896).

In his first group of cases the calculi were found in the gall-bladder or the cystic duct. There was no reason to remove the gall-bladder. In 127 cases there was one death, three days after operation, from cardiac palsy. Fistula closed in all cases.

In the second group the gall-bladder had to be removed on account of suppuration. One patient died out of twenty-one.

The third group comprised the cases in which the calculus encysted in the ductus communis was too voluminous to be removed. Thirty calculi were taken out by choledocotomy, one by cholelithotripsy. There were two deaths—one incident to dilatation of the stomach, the other from perforative peritonitis.

In the fourth group, in 117 cases there were affections other than calculous tumors; for instance, vesical adhesions, etc. Exploratory puncture was necessary to make a diagnosis. Two patients died.

In the fifth group, cancer of the liver or other serious maladies complicated biliary lithiasis. Ten died, out of nineteen.

The operation lasted from two to four hours in fourteen of the cases; five times gastro-enterostomy had to be performed at the same time.

The danger of recurrence of calculus is slight. In one case this was due to retention of a silk suture; hence Kehr employed only catgut for a time, but since one suture loos-

ened he has returned to long threads of silk which can be removed.

As to the operative indications: All these patients had been subjected for a long time and without success to medical treatment and suffered from violent pains. Usually the calculi were very large. It is important to practice surgical intervention before diffuse and suppurative inflammation of the gall-bladder and biliary canal seriously affect prognosis.

NEW REMEDIES IN GYNECOLOGY.

La Médecine Moderne calls attention to two new remedies, irol and formol. Irol contains 45 per cent. of oxalate of bismuth and 24.8 per cent. of iodine. It is a fine greenish powder without taste or odor, insoluble, becoming red and setting free iodine on contact with moist air or warm water. It is not toxic, and does not irritate the skin. It has been employed by Högler in more than two thousand cases in the form of powder, gauze, vaselin, collodion, and emulsion. It has been found especially efficacious in the treatment of ulcers and boils.

Formol, a colorless gas, is very soluble in water and alcohol. It is powerfully antiseptic and non-toxic, and has been used for the preservation of foods by means of a specially constructed alcohol-vapor lamp. It is possible to absolutely sterilize large rooms, the vapor given off being formaldehyde, which, though irritating to the mucous membrane, is not poisonous.

Legen and Levy state that they have obtained excellent results from these medicaments in the treatment of blennorrhagia. Irol is used in emulsion in glycerin and water. This drug prepared with solidified glycerin is also often extremely valuable in the topical treatment of uterine and other gynecological affections. The usefulness of solid glycerin ovules of irol, formol, dermol, aristol, iodol, di-iodoform, ichthyol, microscidine and thiol commends itself at once to all those whose line of work brings to them many cases of infection of the genital tract.

BRAIN COMPLICATIONS OF EAR DISEASE.

SWASEY (*Boston Medical and Surgical Journal*, April 9, 1896), in a careful *résumé* of this subject, says:

Without surgery these cases are doomed. The tendency in the past few years is to operate earlier and more radically than was the case a few years ago.

One of the latest authorities, Thomas Barr, of Glasgow, in an article read before the International Otological Congress in 1895, lays down this as a rule to follow in these cases: "I would therefore say that the present trend of surgical opinion is that we shall rarely go wrong if, in the presence of grave intracranial symptoms due to a chronic septic process in the middle ear, we explore the various pathways by which the disease invades the interior of the skull, and, if no extra-dural collection be found, or when found if its removal be not followed by marked improvement, we open the dura mater and examine the subdural space; and even then, if the results be negative, we need not hesitate to explore the temporo-sphenoidal lobe or the cerebellum, or both."

Starr, of New York, as recently as 1893, in his work on Brain Surgery, says: "As a rule, abscesses lie very deep within the white matter of the brain, and to be reached and emptied the brain must be incised."

Hence it has been the practice, until very recently at least, to open the skull by the trephine at a point or at points distant from the fountain source of the trouble; and to mark these localities, measurements were taken. What is known as Reid's base line is drawn backwards from the under margin of the orbit, through the centre of the external auditory canal to the occiput. Along this line measurements are taken from the centre of the external auditory canal.

As Barker stated that nine-tenths of all the abscesses of the temporo-sphenoidal lobe could be opened at one certain point, this he located by measuring backwards from the bony meatus on Reid's line 1¼ inches, and then directly upwards 1¼ inches. Here it is that the trephine should be placed, if we wish to explore this particular lobe. To go directly into the lateral lobe of the cerebellum, we measure backward on Reid's line 1½ inches and then directly downward one-fourth of an inch. If we measure backward one inch and then upward one-fourth of an inch, we come directly down upon the lateral sinus. To open the mastoid antrum, measure backward one-half an inch and upward one-fourth of an inch. To explore the anterior surface of the petrous bone and part of the temporal lobe, we measure directly upwards from the centre of the meatus one inch. Van Bergman makes this his point of entrance, and from here he would, if necessary, expose the lateral sinus and open the antrum. It is seen that the trephine is very seldom

used in front of the meatus, and only once below Reid's line.

The surgeons at the present day seem to be less inclined to make these distant openings at first; they attack the fountain source of the infection by going through and clearing out the antrum, searching for a carious opening inwards, and following it up if one be found. To expose and examine the mastoid emissary vein at this time may give much important information. If found thrombosed, it will indicate the same condition in the sinus. If the sinus is filled with a thrombus, or more especially if it contains pus, it will need to be shut off from the lungs by a ligature around the internal jugular vein in the neck. If the symptoms indicate more serious trouble than would probably come from simple antrum or attic involvement, and the sinus be free from clots, then more and deeper explorations will be justifiable, for the desperate condition of our patient will necessitate it.

Cerebral abscess, when in the stage of development, is small and superficial, and is on the surface of the brain. When it is larger and of longer duration it sinks into the substance of the brain. And still more frequently is there a subdural abscess just adjacent to the tympanic roof or the wall of the antrum. This is shown by some recent statistics of Jansen, of Berlin, who found in 184 cases of intra-cranial suppuration no less than 144 cases of extra-dural abscess; only thirty-five were sinus thromboses, and but five were cerebral abscesses. This contradicts the statement of Starr already referred to, who also states in another place that cerebral abscess, lepto-meningitis and sinus thrombosis occur with about equal frequency. Jansen's cases show, also, that extra-dural abscess was five times more common in the posterior fossa than in the middle.

These figures seem to show that we should operate earlier, and go into the cranium more frequently; we should be content to explore at first near the roof of the tympanum and mastoid, rather than go to some distant point at once and so leave a large area untouched.

In closing, the author again quotes Thomas Barr, to indicate what has been done in this line in the past few years, and in a way to prophesy of what we may expect in the future. He says: "In the various medical journals I have found in these seven years records of 158 cases in which operations followed by complete recovery have been performed for relief of the intra-cranial complications of purulent ear disease. . . . The record of work during the past seven years in operations for cerebral and cerebellar abscess has been remarkable. At least fifty-nine cases of cerebral and seven cases of cerebellar abscess have been thus successfully treated. Many of these were associated with septic thrombosis of the sigmoid sinus, some with meningitis."

SUCCESSFUL SUTURE OF PERFORATING TYPHOID ULCER.

Dr. F. S. Watson (*Boston Medical and Surgical Journal*) reports the case of a man, twenty-eight years of age, who in the seventh week of typhoid fever was suddenly seized with severe pain and great tenderness of the abdomen, accompanied with a sharp rise of temperature. When seen by the author twelve hours later, there were present signs of beginning collapse. The abdomen was opened by a small incision; the peritoneum found to be thickened, and a loop of the small intestine was attached to the abdominal wall by recent and delicate adhesions; in the centre of the adherent area there was a perforation of the intestine with a ragged border, and of the size of the end of the thumb; from this, feces were oozing. There was a localized, but no general, peritonitis. The perforated knuckle of the bowel was drawn out of the wound; the edges of the intestinal ulcer were excised until sound tissue was gained, and then sutured together with a continuous Cushing suture of fine silk. No other ulcers were found, and the bowel was returned and the abdominal wound closed. There was a good deal of shock, but the patient rallied soon, and convalescence was uninterrupted. This the author believes to be the sixth successful case of laparotomy for perforating typhoid ulcer.—*International Journal of Surgery*, July, 1896.

SUTURE OF A DUODENAL ULCER.

At a meeting of the Clinical Society of London, May 27, 1896, Dr. L. A. Dunn reported the case of a man who, while at work, felt a sudden pain in the epigastrium, attended by nausea and faintness. The abdomen was distended and markedly tympanitic, and the normal hepatic dullness was absent. The abdomen was opened by a median incision above the umbilicus, which allowed of the escape of a quantity of gas and yellowish fluid. A small perforation was found in the anterior wall of the first part of the duode-

num. This was closed with fine silk Lembert sutures, and the abdominal cavity was flushed out with boiled water at a temperature of 100° F.

The patient did well for ten days, when the pain returned and his temperature went up. He became worse, and the abdomen was reopened—on this occasion along the right costal margin, as it was thought that a collection of pus had formed between the liver and the diaphragm. Nothing, however, was discovered, except a few adhesions in this region, chiefly beyond the reach of the finger. An exploring needle, passed through the eighth intercostal space, was felt to traverse the abdomen and perforate these adhesions, and a drop of pus was evacuated by this method. The wound was closed. The temperature fell immediately after the operation, and remained low till the sixth day, when the wound was found to be distended with pus. The removal of two sutures sufficed to evacuate this, after which recovery was rapid and complete.—*International Journal of Surgery*, July, 1896.

INTUBATION.

TRUMPP (*Munch. Med. Woch.*, April 28, 1896) mentions that there is still some doubt as to the method of taking out the tube after intubation, whether by means of a piece of attached thread or by the extractor. There are disadvantages attending the thread method, and especially because the fixing of the tube thus produced does not allow of its free play, and hence causes a liability to erosion of the parts. The use of the extractor, on the other hand, is hardly possible in private practice, as a sudden stoppage of the tube by membrane might cause suffocation unless the tube could be withdrawn without delay. The use of the extractor may also require considerable skill, especially where a small tube sinks deeply into the larynx. In a case where attempts at extraction caused a small tube thus to sink further down, the author adopted the following device: Pressure with the thumb was made on the trachea, just below the cricoid cartilage, where the end of the tube could be felt; the cough thus produced forced the tube out. The author has found that this method of expression never failed in the cases in which he subsequently tried it. The pressure may be made with both thumbs, the fingers finding support on the neck; it should be directed inwards and directly upwards. If a more powerful pressure is exerted the tube may be forced not only into the mouth but even completely out of it. The author has never seen any disadvantages attending this method. Of course the pressure should be made intelligently and not in too forcible a manner.—*British Medical Journal*, May 30, 1896.

ACHILLODYNIA.

ROMME (*La Tribune Médicale*, No. 14, 1896) quotes Albert to the effect that achillodynia is essentially characterized by the circumstance that standing and walking become impossible because of the severe pain they cause. This pain disappears entirely when the foot is elevated and at rest. It is located exactly at the insertion of the tendo Achillis. On examination there is here found a slight swelling suggesting a thickening of the tendon at its point of insertion. There is very little tenderness on pressure. At times it seems as if the posterior surface of the calcaneum was slightly enlarged on each side of the insertion of the tendon.

Schüller held that the symptoms were caused by inflammation of the bursa lying between the calcaneum and the tendon.

Clinical observation of this affection shows that usually in healthy people, as the effect of trauma—for instance, an ill-fitting shoe or a long walk—often without any appreciable cause, pain develops under the insertion of the tendo Achillis; sometimes it attacks both feet. It comes on gradually—at first a dull aching, later almost invariable pain on standing or walking. Under simple treatment, pain disappears, but is liable to recur. It is not liable to be confounded with peri-tendinous cellulitis or with telalgia.

Roessler saw nine cases of achillodynia, but as they got well without operation he had no opportunity for making pathological studies. With the idea that the affection was due to an inflammation of the retro-calcaneal bursa, he made a careful post-mortem examination of a large number of cadavers. He found that the retro-calcaneal bursa was placed between the anterior surface of the tendo Achillis and the posterior calcaneal surface, in the angle formed by these two structures, near the insertion and a little below the upper border of the greater tuberosity of the calcaneum. It is about the size of a fifty-cent piece, and is almost completely covered by a tendon. Above and laterally it is covered by the fibrous tissue which, running from the borders of the tendon, passes

toward the bone, forming a thin investment. Anteriorly and posteriorly this membrane blends with the periosteum and the tendinous sheath. In the interior of the cavity are almost constantly found fatty fringes coming from the adipose peri-articular tissue. Of 225 specimens studied, normal conformation was found in very few. Usually the walls of the bursa were much thickened. Often there was a hypertrophic periostitis with fatty degeneration of the hypertrophied layers. Endothelium was often desquamating or proliferating, forming several layers. In some cases the periosteum corresponding to the anterior wall of the bursa was partly atrophied, with subjacent atrophic osteitis and the formation of exostoses. Sometimes the walls of the bursa were almost cartilaginous. Sometimes the fatty fringes formed veritable foreign bodies, almost completely filling the cavity of the bursa. Very frequently the cavity was filled with a viscid liquid.

Patients are very often sufferers from gonorrhea. The frequency of this disease, however, suggests that this may be a simple coincidence.

Treatment is very simple in acute cases: rest, pressure and evaporating lotions are sufficient to relieve. In chronic cases, massage and pressure by means of a moist sponge held in place by wet bandages usually suffice to bring about a cure. If symptoms persist, incision with drainage or extirpation of the bursa is advisable.

PUNCTURE OF THE LATERAL VENTRICLE.

Von Beck (*La Tribune Médicale*, No. 13, 1896) reports three cases of puncture of the lateral ventricle.

The first case was a boy fourteen years old, who, following diphtheria contracted at the age of seven, suffered from middle-ear disease. This lasted for three years, and remained cured for four. The boy was suddenly attacked with pains in the ear, radiating over the right side of the head, vomiting, coma, but no fever. His neck became stiff, general hyperesthesia developed, and the ophthalmoscope demonstrated a neuro-retinitis. The pulse dropped to 54. The right ear-drum was thickened, discolored, but not painful. The mastoid was trephined and found to be markedly sclerosed. The cells were filled with a turbid serum. The transverse sinus and the temporal lobes were exposed; the sinus was intact. There was no pulsation of the brain. Puncture of the temporal lobe gave negative results. The lateral ventricle was then punctured and seven drachms of cerebro-spinal fluid withdrawn. The comatose state disappeared, pulse rose to 80, neuro-retinitis diminished, and the patient felt very well. The tenth day after intervention, cephalalgia reappeared, with pains in the teeth. A few days later there was vomiting and coma, and the pulse dropped to 54. The trephine opening was then enlarged, and with an aspirating needle the occipital and frontal lobes were explored, with negative results. A new puncture of the lateral ventricle was then practiced, and 2½ ounces of clear cerebro-spinal fluid withdrawn. The symptoms promptly disappeared, but in ten days again developed and were accompanied by facial paresis and palpebral ecchymoses. The lateral sinus was again punctured, and 2½ ounces of clear cerebro-spinal fluid aspirated. The patient had no further relapses; he left the hospital two months later comparatively well, and has remained so since (two years).

The second case was a boy four years old, who, as a result of a fall, suffered fracture of the frontal bone without paralysis. Three weeks after this accident the child was brought to the hospital with the phenomena of meningitis. There was coma, the pulse was running 120, the neck was stiff; general hyperesthesia, exophthalmos, double retinitis and high temperature prevailed. Examination showed a comminuted fracture of the right frontal bone, with suppuration extending over the temporal region. The region of fracture was exposed, the dura mater was found torn, and beneath it there was a cortical abscess the size of a pigeon's egg. This was evacuated and drained. All the symptoms were ameliorated, but eight days later symptoms recurred and there was a hernia of the brain. On the eleventh day convulsions developed; on the fifteenth these were renewed and there was loss of consciousness, with left hemiplegia. The lateral ventricle was then punctured and 2½ ounces of turbid cerebro-spinal fluid evacuated. The symptoms promptly lessened in severity and finally disappeared. The patient recovered completely.

The third case was a girl thirteen years old who, in May, 1893, suddenly lost consciousness. Insensibility lasted but a short time, but was followed by severe cephalalgia. Three weeks later there was a second attack.

From this time these recurred daily, accompanied by vomiting, vertigo, and cephalalgia. This condition remained stationary until September, 1895, when the acuity of vision of the left eye was diminished. Two months later there was blindness of the right eye. Examination showed nystagmus and double neural retinitis, more marked in the left eye. Tumor of the brain was diagnosed. Iodide of potassium given internally produced no beneficial effect. Osteoplastic resection was made over the left occipital region. As intra-cerebral pressure seemed specially well marked, the lateral ventricles were punctured. After evacuation of 2½ ounces of cerebro-spinal fluid the cerebellum was explored, but no tumor was found. All the symptoms became better. Twenty days after intervention there was a relapse, followed six days later, in consequence of excitement, by a loss of sight, high temperature, comatose condition, and an attack of convulsions. The ventricle was again punctured and over seven ounces of cerebro-spinal fluid aspirated. The symptoms again disappeared, and for four weeks the patient remained well. There was then recurrence, which was relieved for the third time by puncture and evacuation of four ounces of liquid. This patient is still under observation.

CASE OF GANGRENOUS CYSTITIS WITH EXFOLIATION OF THE BLADDER-WALLS.

COLLINS WARREN (*Boston Medical and Surgical Journal*, June 25, 1896) reports the case of Mrs. X., aged thirty-eight — not only on account of the great rarity of the affection, but as an illustration of the reparative power of the bladder and the bearing of the same upon surgical operations contemplating removal of a large portion of the bladder, or even the entire organ. Dilatation of the vagina was performed in January, 1893, for the relief of vaginismus. A month later, symptoms of cystitis, which had been present before the operation, became pronounced, and the patient soon complained of obstruction to the flow of urine; on examination a slough was found about the size of two joints of the little finger, protruding from the meatus. Under ether this slough was drawn out by means of dressing forceps until a roll of membrane the size of a pocket-handkerchief had been extracted in one continuous mass. A large quantity of pus escaped as the last corner of the slough was drawn from the urethra. Complete incontinence of urine was the immediate result; but gradual recovery of control finally enabled the patient to attend to her ordinary pursuits and to discard the portable urinal. The urine ultimately became entirely normal.

The exfoliated membrane was crusted with triple phosphates on one side; ragged and infiltrated with opaque, greenish pus on the other. It was made up largely of fibroid tissue, traversed here and there by the remains of blood-vessels. There was no trace of an epithelial surface to be found, nor were there any muscular fibres.

Exfoliation of the mucous membrane of the bladder may be complete or partial; it may include the submucosa and the muscular tissue, or it may only involve the epithelial layers. It is a rare event, and, including the case under discussion, has been reported but fifty-six times in all literature.

The exfoliated membrane may be only a small portion of the mucous membrane alone, or the slough may consist of the entire lining of the bladder *en masse*, with or without the muscular coats. In the case reported by Morez the slough included a portion of all the coats, even the peritoneum; recovery followed.

The cause of the process may be: (1) severe septic involvement of the submucosa, from cystitis or extension; (2) trauma causing extravasation of blood into the submucosa; (3) obstruction of the arterial supply to the mucous membrane by retention of urine, pressure of intra-pelvic tumors, pressure of a child's head or instruments during delivery, or pressure of a gravid retroflexed uterus.

The lesion is by far more common in women. Stein found but five cases out of fifty in males. The forty-five cases in women were due either to pressure during delivery or to the pressure of an incarcerated retroflexed uterus. In men the causes are retention of urine, stricture of the urethra, stone in the bladder, acute or chronic cystitis.

In females, though most of the previously reported cases have been due to pressure and ischemic necrosis, still intense bacterial infection of the submucosa is an effective cause, as in the case of Orlowski in which the bacterial infection of the coats of the bladder took place by extension in a case of dysentery in a girl three years old; necrosis and gangrene, with elimination of the gangrenous portion through the urethra, followed. In the case reported by Lockhart, a young married woman suffering from moderate cystitis, necrosis and exfoliation of the mucous mem-

brane of the bladder followed a few days after an attempted perineorrhaphy; the membranes included portions of the mucous, fibrous, and muscular coats; recovery followed without complications. This case corresponds as closely with the writer's as any of the other reported cases.

Stein reports a case in a man, associated with pyelitis and stone in the bladder. Microscopic examination of the exfoliated masses showed necrosis of the mucosa and submucosa.

The prognosis in men is grave, in women favorable. Of the eight reported cases of this disease in males, two died (Seutham's and Clarke's), six recovered. In Cabot's and Marchand's the exfoliated membrane was only epithelial. Of the forty-six cases occurring in women, including the present one, only nine died. In women, expulsion of the necrotic mass is much more easy than in men.

Gottschalk refers to three fatal cases caused by pressure of a retroflexed gravid uterus.

Fenwick showed a specimen of entire exfoliation of the mucous membrane from the bladder of a man, removed through perineal section done for relief of long-standing purulent cystitis.

Haultain (cited by Fenwick) collected fifty-three cases of this disease, thirty-three of which were associated with pregnancy, and twenty due to septic infection, etc.

One of the immediate results of the process of necrosis and elimination may be spontaneous rupture of the bladder-wall. A second result is the deformities caused by the cicatricial tissue in the process of repair. Any suppurative cystitis involving the submucosa cannot be cured without some contraction of the bladder.

Restoration of the sloughing structures, and complete return of the normal bladder functions, have been noted in many of these cases. The capacity of the urinary bladder for repair, even under the most unfavorable circumstances, is illustrated by many of these cases, notably those of Morez, Fenwick, and Lockhart.

This capacity of the bladder for repair has also been demonstrated in cases of resection of a large portion for any cause.

One of the most remarkable cases illustrating the possibility of the restoration of the bladder is that of Loumeau, of Bordeaux. The case was that of a woman thirty-five years of age. During an operation for the removal of adherent and suppurating uterine appendages, all of the bladder except the portion lying upon the vagina and containing the orifices of the ureters was accidentally cut away. A new bladder was formed by suturing the peritoneum to the portions still left. This vesico-cutaneous sac was treated just as in supra-pubic cystotomy. Recovery resulted, and nine months after the operation the bladder held 360 grammes of urine.

Watson refers to four cases of extirpation of the bladder, with three recoveries.

Large portions of the bladder have been successfully removed in cases of vesical cancer.

FREQUENT URINATION CURED BY THE BICYCLE.

According to the *Centralblatt für die Krankheiten der Harn und Sexual Organe*, 1896, the pollakiuria of young people is seldom associated with disease of the urinary system, the brain, or the spinal cord. Much more frequently it is simply a stigma of neurasthenia. Often all therapeutics are unavailing. It was observed that during bicycle rides the desire to urinate was either entirely wanting or was much less frequent and urgent, and therefore two obstinate cases were ordered to take, twice daily, long bicycle rides; cure resulted in both cases.

DISINFECTION OF THE URETHRA BY THE INTERNAL ADMINISTRATION OF ENTEROL.

FASS (*Centralbl. für die Krankh. der Harn und Sexual Organe*, 1896) states that enterol is a watery, colorless, sometimes slightly brown liquid, with a specific gravity of 1.036, and with the taste and smell of kresol. It is slightly soluble in 100 parts of water, and has about six times the antiseptic strength of carbolic acid. Properly diluted—that is, one part of enterol to 500 of water—it can be given in the dose of from half a drachm to a drachm daily for months at a time without producing any untoward symptoms. It is given in pill, capsule, and mixture with equal parts of olive oil.

Thirty capsules can be taken at once without harm. After entering the stomach, about eighty per cent. remains in the alimentary canal, and twenty per cent. is excreted by means of the urine. If employed in weak dilution and with abundance of liquid, the probability is that much more is absorbed. In the treatment of bacterial inflammations

of the genito-urinary tract, the patient is gently purged, the lower gut washed out with clysters of water or neutral oil, and a milk or liquid diet given, enterol being administered with each repast. After large doses and prolonged use of enterol, the urine sometimes turns green. The author states, however, that he has given the drug in doses of one-half to one drachm daily for weeks, the urine exhibiting the characteristic gray-green color, without producing any systemic complications. Indeed, the drug does not produce the slightest irritation in the kidneys or genito-urinary tract, and even in chronic nephritis the albumin contained in the urine is not increased. Nevertheless, we are cautioned against the use of the drug in cases of acute nephritis, congestion of the kidney, or feebleness of the heart. The drug possesses the merit of being safer and more efficient than any of the non-internal antiseptics. Nervous women, after taking the capsules, complain of an unpleasant taste in the mouth and burning in the stomach. When there is marked inflammation of the stomach, the drug should be greatly diluted. In the case of gastric ulcer the drug should not be exhibited. The indications for the use of the drug are for the cure of cystitis, pyelitis, and before and after operative interference with the urinary passages in cases of acute gonorrhea. In the latter affection the enterol is particularly efficacious, eight capsules being given each day.

DIABETIC GANGRENE.

KÖRNIG (*Berliner Klin. Woch.*, No. 25, 1896) has shown that sloughing inflammations are often the first signs of diabetes in apparently perfectly sound, strong men, and that whenever in this class of patients such forms of inflammation as (for instance) carbuncles develop, the urine should be examined. It must, however, be remembered that in the acme of many inflammatory processes sugar is occasionally found in the urine, but rarely in large quantities, and customarily vanishes when the inflammation has passed its acme. The local treatment of inflammations in diabetics must always be associated with most rigorous constitutional treatment. It is a matter of prime importance to promptly limit the extension of the gangrenous process. When this process is not associated with active inflammatory symptoms, every effort should be made to keep it dry, blisters from necrotic pieces of skin should be cut away, and every wet dressing avoided, even though containing disinfectants; the parts should be dressed with dry iodoform cotton, and so arranged that the air may reach them. When the inflammation is pronounced, long incisions may be made and the necrotic parts removed. When the limb is affected with gangrene, it is well if possible to wait until by anti-diabetic treatment and dry dressing the process has ceased to extend. This, however, is often impossible. Gangrene is prone to steadily spread, and the sugar not diminish; the patient becomes feverish, comatose, and perishes. Under these circumstances the only treatment to be considered is removal of the gangrenous limb. Radical operation, then, is indicated when inflammation is extending in spite of energetic antiseptic treatment, when fever is increasing and sugar not diminishing, and when coma is threatening. The surgeon who amputates must, however, be absolutely sure of his asepsis.

A NEW METHOD OF OPERATING FOR HYDROCELE.

Surgeon-Lieutenant-Colonel E. LAWRIE, of Hyderabad (*The Lancet*, June 13, 1896), presents the following technique in the operation for the radical cure of hydrocele: The sac is punctured in the usual way, and when about a third or one-half of the fluid has been withdrawn two drachms of a saturated solution of bichloride of mercury in glycerin are injected and mixed with what remains, and allowed to rest in the sac for from half a minute to a minute. The whole of the fluid is then drawn off, to the last drop. Very little pain is experienced, and unless the patient is nervous and takes chloroform he is able to move about immediately after the operation. For the next few days he must, as a rule, lie about, but need not in any case be confined to bed, and in a week or less he is quite well. Provided the surgeon is careful that his hands and instruments and injections are clean and free from micrococci when the puncture and injection are made, these produce a uniform result—*i. e.*, sufficient aseptic inflammation to obliterate the sac and nothing more.

PROPHYLAXIS AND TREATMENT OF PUERPERAL MANIA.

SAVAGE (*Gaz. Hebdom. de Méd. et de Chir.; Centralbl. für Gynäk.*, No. 25, 1896) thus classifies puerperal mania:

1. Psychical, during pregnancy: (*a*) in the

first months, and coincidently with pregnancy; (*b*) in the last months.

2. During childbirth: (*a*) hysterical and transitory; (*b*) chronic.

3. In the course of mastitis, lasting sometimes but a single day. This form may also become acute.

4. In the second week following delivery.

5. From the second to the sixth week after delivery.

6. Following weaning.

Heredity plays a major rôle in the development of the puerperal psychoses. The question may well be raised as to whether a hysterical woman is justified in marrying. When the first pregnancy occurs after the thirtieth year, complications of this nature are peculiarly liable to develop. Mania may be the first symptom of pregnancy; if it develops during the first months it is as a rule light and transitory; if during the last months, it is much more liable to persist, hence little is to be hoped for from premature delivery. During parturition, hysterical outbreaks may occur with every pain; they usually disappear after delivery, but occasionally persist. When symptoms of disturbed intellect develop during the first fourteen days following delivery, they are usually maniacal in character; when they come later, they are usually more in the nature of a melancholia. There is often sleeplessness, absolute loss of appetite, and loathing of surroundings. Recovery may take place in a few weeks or some months. It is often necessary to change the residence of the patient. It is important to avoid further pregnancies in the next few years. Eight per cent. of the author's cases of puerperal mania died; twenty per cent. did not recover fully. General paralysis sometimes develops as a complication. The psychical disturbances following weaning are often associated with bodily weakness, are melancholic in type, and are often completely curable. The first symptom of mania is sleeplessness, and the outbreak may sometimes be avoided by the early use of chloral and bromide.

TREATMENT OF URTICARIA BY CALCIUM CHLORIDE.

WRIGHT NETLEY (*British Journal of Dermatology*, January, 1896) reports the case of a patient eighty-four years of age, who, after six weeks' suffering from a very severe and obstinate urticaria, was greatly weakened from loss of sleep. In the beginning of the attack there was much dyspnea and marked irregularity of the heart. The itching was intense, so that the patient was kept scratching day and night. With the idea that the disease might be due to a change in the coagulability of the blood, chloride of calcium was given in thirty-grain doses night and morning. All other drugs excepting sulphonal were discontinued. There was immediate improvement, the patient passing a good night. The dose was increased to forty-five grains. The pulse became more regular, the eruption on the arms disappeared almost completely, and the itching was less intense. After two weeks the patient was comparatively comfortable.

The second case received some antitoxin injections because of diphtheria. Following this there was a violent outbreak of urticaria. Sixty grains of calcium chloride were given in two doses. The patient rapidly recovered.

Reviews.

THE USE OF SYMPTOMS IN THE DIAGNOSIS OF DISEASE. By Hobart Amory Hare, M.D., B.Sc. Illustrated with engravings and colored plates.
Philadelphia and New York: Lea Brothers & Co., 1896.

The preface of this book so well describes its object that we print it herewith:

"The object of this volume is to place before the physician and student the subject of medical diagnosis as it is met at the bedside. To accomplish this, the symptoms used in diagnosis are discussed first, and their application to determine the character of the disease follows. Thus, instead of describing locomotor ataxia or myelitis, there will be found in the chapter on the Feet and Legs a discussion of the various forms and causes of paraplegia, so that a physician who is consulted by a paraplegic patient can in a few moments find the various causes of this condition and the differential diagnosis between them. So, in the chapter on the Tongue, its appearance in disease, both local and remote, is discussed. In other words, this book is written upon a plan quite the reverse of that commonly followed, for in the ordinary treatises on diagnosis the physician is forced to make a supposititious diagnosis, and, having done this, turn to his reference book and read the article dealing with the disease supposed to be present, when if the description fails to coincide with the symptoms of his case he must make another guess and read another article. In this book, however, the discovery of any marked symptom will lead

directly to the diagnosis. Thus, if the patient is vomiting, in the chapter on Vomiting will be found its various causes and its diagnostic significance, and the differentiation of each form of this affection from another.

"The value of the book is increased by the preparation of two indexes, one of symptoms and the other of diseases.

"Basing his efforts upon the experience which he has had in both didactic and clinical teaching of large classes of students during the last twelve years, the author hopes that the work may in some degree lighten the labors of the general practitioner and student, and relieve the all-important subject of diagnosis of some of the difficulties which surround it. He has also endeavored to make the text serve as an aid to the rational use of his Text-book of Practical Therapeutics."

SYSTEM OF SURGERY. Edited by Frederic S. Dennis, M.D. Assisted by John S. Billings, M.D., LL.D. Profusely illustrated. Vol. IV.

New York and Philadelphia: Lea Brothers & Co., 1896.

This volume is, with possibly the exception of the first, the best that has been issued. The illustrations are admirable, and the editorial work (meaning by that the moulding of the divers elements of the book into a symmetrical whole) is particularly well done.

Dennis contributes the first article, upon Tumors. His classification is founded upon that of Gouley. To a practical surgeon it seems somewhat complex and with certain strange new terms which are confusing. A full consideration is given to the antitoxin treatment. Indeed, the whole ground of pathology and therapy is well traversed.

The chapter on Hernia is written by Bull and Coley. The treatment is more clearly and fully described than in any text-book yet published. The illustrations are admirably chosen.

Richardson, assisted by Cobbe, contributes a section on Surgery of the Alimentary Canal from the Esophagus to the Ileo-cecal Valve. This chapter could not be improved. All the well tried methods of technique are described.

The section on Appendicitis is contributed by Hartley. McBurney writes on the surgical treatment of this affection.

Pilcher contributes the article on the Alimentary Canal from the Ileo-cecal Valve to the Anus. In the treatment of Intussusception it would have been well to have described the modern technique of resection of the intussusceptum through a lateral opening in the wall of the bowel.

Abbé writes briefly on the Surgery of the Liver and Biliary Passages. Surgical Disorders and Diseases of the Uterus are considered by Polk. Johnson treats of Disease of the Ovaries and Tubes. A particularly useful chapter on Minor Gynecological Surgery is written by Coe. Symphysiotomy has been considered worthy of a special section, and has been exhaustively discussed by Lusk. Weir and Foote contribute an excellent but very brief article upon the Surgical Aspects of Goitre. Matas writes upon the Surgical Peculiarities of the Negro, an important subject, considering the large colored population in America, if these peculiarities are numerous or well marked. Diseases of the Female Breast are treated by Dennis. Halsted's technique is given as the best.

The book ends with a beautifully illustrated article upon the Roentgen Rays, by Keen.

This is the last volume of the System, and is likely to hold its own against any rival which will be published within the next few years. The work, though extremely unequal, is of a high order of merit. Essentially the teaching is practical and useful, and particularly in this last volume modern methods have been fully described and credited. The System is highly creditable to the editors, authors, and publishers.

MATERIA MEDICA AND PHARMACOLOGY. Comprising all the Organic and Inorganic Drugs which are and have been Official in the United States Pharmacopœia, together with Important Allied Species and Useful Synthetics. By David M. R. Culbreth, Ph.G., M.D. Copiously illustrated.

Philadelphia and New York: Lea Brothers & Co., 1896.

An examination of this volume by a practicing physician reveals the fact that it will prove much more useful to the druggist and the pharmacologist than to him who uses practical therapeutics by the bedside. It is copiously illustrated with good figures of nearly all the important medicinal plants, and the text is clear and concise in its description of their appearances and medicinal properties. Under the head of each drug a statement is made as to the portion which is employed in medicine; and its habitat, synonyms, popular name, and name in other languages than our own, are given. Careful directions are also given as to the manner in which the names of unusual drugs are to be pronounced. In many respects, in its description of the active principles of the various drugs and the crude drugs themselves, it resembles closely the information which can be

obtained from the National Dispensatory, although of course it is a much smaller volume —818 pages.

To students of pharmacy it will prove an invaluable aid. Its use among medical students will depend very largely upon the views held by the individual teacher as to what medical students should study concerning drugs: to those who wish to devote their time chiefly to therapeutics it will not prove serviceable, but among those who wish their students to obtain a thorough grounding in the botanical portion of materia medica it will no doubt win great popularity.

A Manual of Clinical Diagnosis by Means of Microscopic and Chemical Methods: For Students, Hospital Physicians, and Practitioners. By Charles E. Simon, M.D. Illustrated.
Philadelphia and New York: Lea Brothers & Co., 1896.

The object of this octavo volume of 500 pages is to present to the classes of persons named in its sub-title the accurate methods of microscopical and chemical analysis as they are or should be employed in the practice of clinical medicine.

Nearly all the books on diagnosis which have been published heretofore have devoted themselves chiefly to the clinical side of the subject; whereas in this volume the purely symptomatic evidences of disease are almost entirely ignored, and the signs obtained by analysis thoroughly dwelt upon.

A careful examination of the volume shows that Dr. Simon has been careful to put himself in touch with all the recent work which has been done in this line, particularly in Germany and France, and we believe that he has produced a book which is at once a credit to himself and the subject of which he treats. Some of the colored plates which adorn the volume are very good, and the observations and the methods which the author makes and recommends are generally clear and concise. We note on page 72 there is evidently a mistake in regard to the description of the Fig. 22 in which "Daland's Hematokrit" is represented by the simple rubber tube which is used for sucking up the blood, without any other attachments.

American Text-book of Applied Therapeutics. For the Use of Practitioners and Students. Edited by J. C. Wilson, M.D., assisted by Augustus A. Eshner, M.D.
Philadelphia: W. B. Saunders, 1896.

This is a volume similar in appearance and arrangement to the other "American Textbooks" in this series which Mr. Saunders has been publishing during the past two or three years. In all it contains 1326 pages, and, like its predecessors, is printed on handsome paper and with good type. There are forty-two contributors, many of whom have written more than one article. The only criticism of any weight which has ever been urged against the usefulness of such composite works is that they are necessarily uneven in the quality of the articles, and that a certain amount of overlapping of subjects is almost unavoidable. As a result of this, different views regarding the same subject may be found in different portions of the volume. The only way in which this can be avoided is by careful editorial supervision and by having the number of contributors as small as is consistent with the completeness of the work. If any criticism can be offered in relation to this volume it is that too many contributors have written for its pages and as a result many articles are exceedingly brief, in one or two instances not covering a page.

From beginning to end the newer method of spelling has been carefully adhered to, and the editor tells us in his Preface that he is entirely responsible for it and has introduced it notwithstanding the protests of some of his contributors.

The volume opens with an article upon Acute Poisoning, by Dr. I. E. Atkinson, of Baltimore, which is scarcely as exhaustive as could be wished. The various poisons considered are not classified upon a chemical basis, nor are they arranged alphabetically in the order of their consideration. We notice that, under the head of "Phosphorus Poisoning," nothing is said about the usefulness of permanganate of potassium, and that the danger of using sulphate of copper in full doses is apparently not recognized. It will be remembered that in Thornton's experiments, of the animals which received poisonous doses of phosphorus, those to which an emetic dose of sulphate of copper was also administered succumbed sooner than the others, the copper seeming to produce symptoms of poisoning more rapidly than the phosphorus. The statement is made, under "Antimony," that there is no physiological antidote to this drug. While this may be true, strictly speaking, if it is true practically there is almost no substance which can be considered as a physiological antidote to anything. In the discussion of aconite poisoning, we notice that digitalis is not recommended as strongly as it should be as an antagonist to monkshood, for it has been

proved by a great number of observers that digitalis is one of the purest physiological antagonists to aconite that it is possible to find in the realm of medicine. Under "Strychnine Poisoning" the use of nitrite of amyl for the purpose of controlling convulsions is not, we think, sufficiently emphasized.

The article upon Dengue is by J. W. McLaughlin, but a careful examination of the list of contributors to the volume fails to show this gentleman's name in the list. We presume that it has been left out by error. This article covers but little more than three pages.

The article upon Exanthemata, by Dr. George Dock, of Michigan, is much more exhaustive, covering thirty-eight pages, and deals quite thoroughly with the therapeutics of these disorders.

The editor, Dr. Wilson, contributes the article upon Enteric Fever, which is illustrated by a diagram showing the deaths from enteric fever before, during, and since the introduction of sewerage and water-supply in several of the large cities of the world; the prophylaxis as well as the actual treatment of the disease is carefully considered. The author has very distinct ideas as to the methods which should be employed in the treatment of this disease, and does not fail to make himself understood. Careful records are given, showing the results of his plan of treatment, which, it is well known, closely follows that of Brand. The editor also contributes the article upon Typhus Fever, Relapsing Fever, Cerebro-spinal Fever, and Migraine. The well known authority upon Cholera, Dr. Shakespeare, writes the article upon that subject. Dr. John Guitéras, formerly of the U. S. Marine Hospital Service, contributes the article upon Yellow Fever, and his wide experience with this disease will cause his article to be read with interest.

The important subject of Tuberculosis is considered by Dr. James T. Whittaker, of Cincinnati, in an article of seventy pages. The writer discusses both prophylaxis and actual treatment. He has evidently looked carefully over the literature in connection with this subject which has accumulated during the last few years, and has embodied the results of his investigations in this article. We confess, however, that we do not see very much value in the picture of the chair used on transatlantic steamers, which is printed on page 367, and we do not think sufficient attention has been paid in the article to the climatic treatment of this disease, although we appreciate the fact that a thorough discussion of this remedial agent would be impossible in so limited a space.

The article upon Syphilis, by Dr. Orville Horwitz, shows evidence of careful preparation and a basis of personal experience. For this reason it will prove of great value to the practicing physician.

In the article upon the Treatment of Dysentery, Dr. Johnston of Washington advocates strongly the use of high rectal injections.

The article upon Malaria is contributed by Dr. Laveran, whose name is so closely connected with the micro-organism of this disease; and it is very practical, although the author has won his reputation as a scientific investigator rather than as a practicing physician.

In the article upon Malarial Hematuria, by Dr. Dawson, it is interesting to note that this gentleman is evidently a believer in the use of quinine in this condition. He states that rapid cinchonism should be our first aim in its treatment, and almost entirely ignores the claim of many American and European physicians that quinine in this condition is capable of doing harm. We believe that while, in many instances, quinine is of great service, it cannot be used in all such cases with impunity, and we are sorry that Dr. Dawson has not presented the other side of the picture for the consideration of his readers.

The article upon Rheumatism, written by Dr. Stewart, of Montreal, is much like the paper he contributed to the System of Therapeutics edited by Dr. Hare some years ago.

The article upon Diabetes covers but eight pages and therefore cannot be a very exhaustive one. We note that its author, Dr. Stewart, does not seem to have any favorite method of treatment for diabetes aside from diet. The treatment of diabetes insipidus which he gives is equally lacking as to his personal views.

Dr. Stockton, of Buffalo, has contributed the article upon Diseases of the Stomach, and, as is well known, brings to his work the results of a large amount of personal experience and original investigation of this subject. His paper is well worthy of careful study and is one of the best in the volume.

The article upon Infant Feeding and the Digestive Disorders of Infancy is by Dr. Graham, of Philadelphia, who has prepared an exhaustive and careful paper upon these important subjects. We are glad to note

that Dr. Graham emphasizes the importance of well performed enteroclysis in cases of cholera infantum.

Dr. Mackenzie's article upon Disease of the Upper Air-Passages is a very practical one, in which minute details are given for the treatment of the affections discussed.

Dr. Forchheimer's article upon Diseases of the Heart is quite thorough, but scarcely as therapeutic as might be desired in a volume devoted to treatment.

The chapter upon Diseases of the Blood and Ductless Glands was written by Dr. Osler, whose contributions upon this subject during the last few years are so well known; while Dr. Tyson writes upon his specialty, Diseases of the Kidneys.

The article upon Nervous and Mental Diseases, by Dr. Eskridge, was evidently prepared not only from personal experience but with a careful examination of current literature, and we are glad to note that this gentleman, who is doing so much to advance the study of neurology, has contributed so good a paper to a volume which will have so much influence with the general practitioner.

The article upon Diseases of the Skin and its Appendages, by Dr. Stelwagon, is one of the longest in the book and is very practical.

The last article in the volume is upon Pregnancy and its Disorders, by Dr. Theophilus Parvin, whose excellent style in medical writing is so well known to those who keep themselves in touch with medical literature in his particular line.

We doubt not that the book will be, as it deserves to be, a popular one, and we congratulate the editor upon the completion of a task which he set himself some years ago and which he has brought to a conclusion, during the press of large professional duties, with much skill and success.

INDEX CATALOGUE OF THE LIBRARY OF THE SURGEON-GENERAL U. S. ARMY. Second Series. Vol. I: A to Azzurri.
Washington: Government Printing Office, 1896.

The Index Catalogue in its first series is so well known to literary medical men that a description of the second series, which is gotten up on a precisely similar basis, is entirely unnecessary. The present volume, which is designed to keep up to date the references to medical literature, contains an index of 6127 volumes and 6327 pamphlets. It also contains 7884 sub-titles of separate books and pamphlets, and 30,384 titles of articles and periodicals. It contains 828 pages.

Correspondence.

LONDON LETTER.

BY ST. CLAIR THOMSON, M.D., M.R.C.P., F.R.C.S.

The substance of the report of the Vaccination Commission is much as I foreshadowed it would be in my last letter. This report is hailed by a leading anti-vaccinationist as "a victory all along the line," while all the journals of the profession express their content with the "absolute unanimity of the Commission on the great question as to the protective influence of vaccination against smallpox." I certainly have no intention of wading through the evidence which has led to these conflicting conclusions, for I note that in actual weight the volumes in which it is printed turn the scale between thirteen and fourteen pounds, while the number of questions put and answered amounted to 31,398! Had one the time, some amusing extracts might be made from the replies of the anti-vaccinationists, and certainly these gentry can never again complain that they have not had a sufficient hearing. One received and answered 1961 questions, although he confessed that "he had no medical knowledge whatever," and "did not make the least profession of any." Some were not so modest, for one witness was of opinion that "under certain circumstances syphilis might induce leprosy." Most of them "had thought the matter out for themselves." Hence a stenographer opined that "smallpox was not a disease, but simply a constitutional crisis;" an engine-smith "had a grave suspicion that vaccination had introduced consumption into his family;" a hatter and hosier, whose child had a cervical abscess, forbade the doctor to open it, and attributed it to vaccination—"no amount of medical men will ever eradicate that opinion from my mind," he added. He was asked if he had never heard of abscess apart from vaccination, and he answered, "I cannot say that I have." A homœopathic doctor reported a case of syphilis after vaccination; he had not inquired into the history of the father, and had not even seen him. Another homœopath gave, as results of vaccination, one case of malignant disease, three of infantile paralysis, and one of acute peritonitis. In the last case there was complete obstruction ending in death, no post-mortem was made, and in forty five years of "active practice" the doctor had never seen a case of internal strangulation. We can now under-

stand why the Commission has been sitting for seven years.

The conclusion of the whole matter appears to be that the claims of vaccination have been fully established. In the words of the report, "It is to be hoped that our report will stimulate belief in the efficacy of vaccination." The first conclusions as to vaccination are: that it diminishes the liability to be attacked by the disease; that the protection it affords is greatest during the years immediately succeeding the operation of vaccination; and that though after the lapse of some nine or ten years the protective potency diminishes, it still remains considerable "and possibly never altogether ceases." All the various explanations as to the decrease of smallpox advanced by the opposers of vaccination—improved sanitation, isolation, etc. —are duly considered and rejected. The Commissioners declare that unless vaccination be accepted as the explanation of the control of smallpox which has taken place since Jenner's days, then the whole subject remains "an unsolved mystery."

In their enthusiasm in recommending Jenner's discovery to the world, medical men have, probably, a little overstated the case in its favor. This is brought out in the report, which acknowledges that there are risks attending the operation, especially when antiseptic precautions are neglected. The recommendation of the employment of calf-lymph will at least remove the objections of those who fear that vaccination may be the means of transmitting human disease, and does not in any way invalidate the belief in the vaccine. Again, the value of notification, isolation and sanitation is emphasized—they are important auxiliaries in the extermination of smallpox. Those who trust in vaccination too blindly as a panacea have possibly been rather apt to neglect these aids. I am inclined to think that some of us may be misled in the same way with regard to the diphtheria antitoxin; at least, I hear from Italy that the "*heilserum*" has been received with such enthusiasm as a specific that isolation, disinfection and general sanitation have in consequence fallen into so much neglect with regard to diphtheria that the number of cases is daily increasing! At the same time the records of cures are trumpeted forth to an admiring world!!

The anti-vaccinationist who hailed the report as a victory for his party "all along the line" was probably misled in his conclusion by the proposed alteration in the administrative laws. The Commission are not satisfied that direct compulsion is right or expedient. In fact, they are inclined to think that it is wrong to meet a conscientious objection with fines and imprisonment, and that such methods only conduce to the manufacture of "martyrs" and to a stronger objection on the part of the public to submit their children to vaccination. While proposing to do away with direct compulsion, they suggest that the vaccination of the population should be secured by other means. Amongst the latter are the use of calf-lymph, as already mentioned; the performance of the operation in domiciliary visits, instead of at a central station; and the permission on the part of the parents to make a "statutory declaration" as to their objection to vaccination. So as to avoid this latter being taken advantage of by lazy and thoughtless individuals, it is recommended that it should involve on the part of the parent quite as much trouble as accepting the free vaccination.

Is this proposal to give further liberty to the individual in matters of public welfare a step in advance or a retrogressive one? Education has been accepted as a national question, and parents are fined who do not send their children to school. Private wells are at times closed by the authorities, and the population is compelled to accept (and pay for, too!) the water which is offered instead. In many cities private slaughter-houses are prohibited, and all cattle must be butchered in the municipal abattoirs. If the individual is not allowed to drink the water he prefers, to kill his own sheep, and to let his own child run free, is he not to be compelled to have it vaccinated so that it does not spread a foul disease? Or are we sufficiently advanced to trust in the "sweet reasonableness" of Demos, and is the hope of the Commission not a vain one that the substitution of gentler measures will "stimulate belief in the efficacy of vaccination"? Gibbon held that "persuasion is the resource of the feeble." But it may be objected that Gibbon was too deeply imbued with the Roman method of government to be taken as a modern guide on such a question, and to his dictum it may be quoted that "persecution is the method of the stupid."

The proposal to abrogate the compulsory clauses of the Vaccination Acts has been mistaken to indicate a confession that confidence in the value of Jenner's discovery has been shaken. A study of the report shows that this is not so. The value of vaccination

has been confirmed; it is only proposed to modify the manner in which its adoption has been enforced.

To be President of the British Association for the Advancement of Science—to give it its full title, for it is currently referred to as "the British Association"—is about the highest of scientific honors. Our profession is therefore well satisfied to see that this year the office is so well filled by Sir Joseph Lister, who happens at the same time to be the President of the Royal Society. At the annual meeting in Liverpool he selected for his inaugural address the Interdependence of Science and the Healing Art, simply and clearly telling the "fairy tale of science" in so far as it concerned our profession in the last fifty years, so that it could be understanded of the people. To us it is of course a twice-told tale, so that it is sufficient to give an outline of his speech. His theme was the success which has attended the surgeon and physician in the last half-century in their struggle with disease and the results of injury. He told his audience that "the practice of medicine in every department is becoming ever more and more based on science as distinguished from empiricism." Somewhat curiously, as it seems to me, he began at the end by referring to the very latest discovery of science! After showing the increased precision to be obtained by the aid of the Roentgen rays, he reminded his hearers that the present year is the jubilee of anesthesia in surgery. But not only have anesthetics been useful in relieving pain; their uniform action, not only on all members of the animal kingdom, but also on vegetables, is an indirect illustration "that living matter is of the same essential nature wherever it is met with on this planet." I am glad he referred to the subject of antiseptics, for I remember that when I was his interne he used to say that the day would come when the public would get to know of antiseptics, and would insist on their medical men being able to use them, and that, moreover, it would be criminal not to employ them! At that time the realization of this statement seemed very far away, but twelve years have seen a rapid diffusion of his principles and he himself acclaimed at a period when innovators like himself were still toiling in oblivion. On antiseptic methods in surgery, as Sir Joseph said in his address, he had hitherto refrained from speaking in public, partly because the details were too technical for a general audience, but "chiefly because he felt an invincible repugnance to what might seem to savor of self-advertisement." There is unavoidable regret in reading that "the latter objection now no longer exists, since advancing years have indicated that it is right for him to leave to younger men the practice of his dearly loved profession." He then simply told the story of the gradual evolution of his principles, from the day when he first became acquainted with the researches of Pasteur and found that carbolic acid was an "antiseptic." He passed on to narrate the triumphs of bacteriology and the romantic story of phagocytosis. There is no Section for Medicine in the Association over which Sir Joseph was presiding—it is not, like its German analogue, a society of "*Naturforscher und Aerzte*"—so he concluded by hoping that he has shown that "medicine was no unworthy ally of the British Association; that while her practice was ever more and more based on science, the ceaseless efforts of her votaries to improve what had been fittingly designated *Quæ prosunt omnibus artes* were adding largely to the sum of abstract knowledge."

In one of the Sections of this same Association a paper was read on "Metric Measures," which, it was said, would doubtless be legalized in this country before long. The British love of compromise was well shown by the suggestion of the reader of the paper that there was no need to sweep away the method now in force, as the two systems might be combined, and the retention of old forms would make our untaught population familiar with new principles. Hence the old names should be applied to new equivalents, and half a kilogramme would be called a pound! This semi-reactionist was eclipsed by Sir Frederick Bramwell, who one year occupied the position in the Association now filled by Sir Joseph Lister, and who came boldly to the defense of our old and delightfully illogical system. He is reported to have said "that in point of ease of calculation and in point of mental arithmetic our ordinary English weights and measures and vulgar fractions would any day enable any person of ordinary intelligence to do his work more accurately and more speedily than a man who employed decimals, and still more than a man who employed decimals plus the metric system." I suppose the more useful, practical and simple an innovation is, the more it meets with opposition. Sir Frederick's contention was "received with applause;" but then his audience was chiefly British and possibly felt that our system of measures was

a purely insular production and far removed from any suspicion of wearing that despised title of "Made in Germany."

Let me again remind your readers that the British Association will meet in Quebec next year, shortly before the gathering of the British Medical Association in Montreal. While still on the subject of these gatherings, which are called by the profane "scientific picnics," it should be noted that the International Congress of Librarians will take place in London next fall. Already 300 delegates from America have sent in their names, but, from all I have heard from English visitors to the States, these delegates will not find here anything they do not know already in the art of the librarian.

"Defense or not defense, that is the question," or, rather, one of the questions, which is very much with us since the meeting of the British Medical Association in Carlisle. Those in favor of the proposal urge that the Association is the only professional corporation which can take up the subject of the defense of its members, and that it can do so effectively and relatively cheaply. Those who oppose affirm that the Association is a scientific body and not a trades union, that defense and such like matters should be left to defense unions and other societies, and that if the Association undertakes all sorts of sundry duties—prosecuting quacks, opposing medical aid associations, drawing up "codes of ethics," etc., etc.—it will cease to fulfill the purposes for which it was founded, lose the esteem of the public, and only lower the dignity of the profession. The matter is, I understand, to be submitted to the various branches, and I presume the Council must abide by the result whether it prove the inauguration of a still more prosperous future—according to some—or the commencement of the *débâcle*, according to others.

There appears to be a wide feeling of unrest and desire for some sort of change; whether "change" and "reform" will turn out to be the same thing, only time will show. The annual attempt at "editor-baiting" was more vigorous than usual, although not more successful. The *Medical Press* has come to the support of Mr. Ernest Hart in a vigorous leading article, in which the writer "feels it to be a duty to express his opinion that the editor of the *British Medical Journal* acted as an honorable journalist should do, and as the editor of the *Medical Press* would do under similar circumstances." The editorial "we" also considers "that all advertising dodges, whether by emblazonment on hotel door-posts, on race-course buildings, or on insurance prospectuses, are, if pursued beyond a very limited degree, wholly incompatible with the honor and dignity of the profession, and none the less so because they are occasionally resorted to by practitioners whose high standing and monetary position ought to allow of their cultivating self-respect. We do not expect that journalistic condemnation will ever prevent some people from cultivating business by discreditable means, but it is, nevertheless, the duty of the editor, when called on, to say emphatically what means *are* discreditable."

"Mental Therapeutics" are every day receiving more attention of a discreet character, doubtless stimulated by the researches, without the excesses, of the school of hypnotism. Many interesting points are touched on in an address given by Dr. Schofield before the Harveian Society. He suggests that the conscious mind is a very small part of the whole of the psychic force in us, and that it bears the same proportion to the vast subconscious mind which the surface of a coral island bears to the stupendous structure hidden away below the ocean, and of which it forms only the topmost layer. Of the workings of this subconscious mind many interesting examples are given. An authoress has remarked that the pen of a ready writer seems to dip itself into the ink at the right moment, to form of itself all the words, and even to select different words to begin each sentence and to avoid terminating them with prepositions, while all the time the conscious mind is deeply occupied with the plot. The marvels of playing a brilliant piece on the piano while at the same time conducting a vigorous flirtation show also the greatness of our unconscious powers, especially when we remember that Sir James Paget has pointed out that in rapid playing the finger moves twenty-four times a second, each movement involving at least three muscular acts, which, if multiplied by ten, gives 720 muscular impulses per second for both hands. This subconscious mind is often deepening impressions when we least suspect it, so that it has been well said in Germany that skating is learned in summer and swimming in winter. An oft-heard tune we will unconsciously hum, whereas if we try to hum it consciously it goes from us. For the same reason we can often remember things better when we cease to make the effort to do so with our conscious minds.

Now mental therapeutics can be applied

to the body in one of three ways: (1) by the unconscious mind indirectly—in spiritual or physical influences or surroundings; (2) by the unconscious mind acted on by the conscious indirectly—in rousing faith in persons, remedies, or places, etc.; and (3) by the unconscious mind acted on by the conscious by direct effort—in determination to get well, to shake off illness, ignore pain, etc. With regard to the ailments in which mental therapeutics are useful, they are a powerful means of cure in all disease processes, while in hysteria and allied neuroses they are the only reliable means of permanent efficacy.

Sir Dyce Duckworth, without dwelling on the value of mental therapeutics, has pointed out their use by means of the clock, showing the great effect in cases of persistent vomiting in giving the liquid food in teaspoonfuls every five minutes by the clock. If the patient is told that the food thus given will be retained, and if he can see the clock clearly from his bed, it will probably be successful, for at the exact time the subconscious mind enables the stomach—probably by some inhibitory power over the vomiting centre in the medulla—to retain the food. The extraordinary value of the clock in labor in producing regular pains is apparently not fully appreciated. What a fountain of health it may also become to both mother and child! The nursery without it is a scene of confusion and bad management, which ceases when mother and nurse have learned that the child must be nursed in the day every two hours by the clock, and every four hours at night, and never at other times. The real value of the clock in this as in other cases is truly scientific, and depends for its potent effects on rapidly formed accurate psycho-physical habits, or artificial reflexes in the brain. It is still much too commonly imagined that hysteria is simply a form of malingering, and the very word "hysteria" is uttered with contempt. A disease due to the imagination is not necessarily an imaginary disease, but can produce functional and every organic disturbance. The late Dr. Sutton once remarked: "If a man is so ill as to say he is ill when he is not ill, he must be very ill indeed." Indeed, it has been well said: "We think as we feel, or think we feel, and we feel as we think. If we feel a pain, we think we are ill; and if we think we are ill, we feel ill." As to the employment of mental therapeutics, we must strive to wrap up our suggestions in objective treatment, directed ostensibly and vigorously to the simulated disease.

To those of a psychological turn of mind I would recommend as well worthy of perusal a small work of 230 pages entitled "The Crowd; a Study of the Popular Mind," by Gustave Le Bon, and published by T. Fisher Unwin. The subject is interesting to every one, and particularly to legislators and statesmen at the present time when "the voice of the people" is the final court of appeal on numbers of points on which they are just now utterly unable to form an opinion. The power possessed by a crowd is thus accounted for by Mr. Le Bon: "An isolated individual knows well enough that alone he cannot set fire to a palace or loot a shop, and should he be tempted to do so he will easily resist the temptation. Making part of a crowd, he is conscious of the power given him by numbers, and it is sufficient to suggest to him ideas of murder or pillage for him to yield immediately to temptation." This feeling may be worked upon for good or evil, and is the basis upon which "suggestion" operates when applied *en bloc*. How the orator makes use of it is well shown in Emerson's essay on "Eloquence," and the peculiar contagium of a crowd is charmingly and perfectly described—though not psychologically analyzed—in Guy de Maupassant's exquisite little work entitled "*Sur l'Eau*."

It is somewhat curious that sanitation should have made so much progress in this country, and that the public health should be so well maintained, when we consider how loath the State is to interfere for the public weal. Our journals lately have shown the varieties in strength of the diphtheritic antitoxin serums placed on the market from different sources. In Germany there is a State institution for the standardizing and supervision of this remedy. The member of our Government whose concern this was supposed to be, was approached with reference to the establishment of a similar system of control in this country. The Minister declined to interfere, pleading as an excuse that the department of which he is the official head had only to do with the prevention of disease, and not with its treatment.

"Thymus-feeding in Exophthalmic Goitre" formed the subject of one of the papers read at the last gathering of the British Medical Association, and, although only three cases were reported, the result in all was a restoration to health. The dose was half an ounce to an ounce three or four times a week. That the results were not mere coincidences was shown by the observation of one case which

did not respond to the gland, although it had always previously been relieved. This was found to be due to the glands having been taken from a full-grown sheep. On giving calf's thymus, most urgent symptoms were at once relieved, especially dyspnea, palpitation, and tremors. The thymus gland has been found hypertrophied in Graves's disease by a number of observers. Joffroy has remarked that this "revival" of the thymus was found almost exclusively in this disease. It was clear, therefore, that this gland played a part in the disease, and that there were grounds for believing that its hypertrophy was compensatory, its internal secretion serving to neutralize the toxic agent which caused the disease. It is noteworthy that Graves's disease is almost unknown in infancy when the thymus gland is present. The fact that the thyroid gland is more active during infancy than it is later would render the infant more liable to hyperthyroidization were there not some counteracting influence which the thymus gland possibly supplied. There is some evidence of antagonism between the thyroid and thymus glands. Thyroid extract increases tissue waste. On the other hand, the thymus gland is most developed during infancy, and in hibernating animals at each period of hibernation, which pointed to this gland exerting an inhibitory influence over waste. This apparent antagonism supplies a hypothetical explanation to the mode of action of thymus in the treatment of exophthalmic goitre—a disease most probably due to excessive activity on the part of the thyroid gland.

Three chief forms of cretinism are described: One variety is embryological, due to thyroid non-development or partial development, and analogous to acardia or anencephalism. A second variety is due to atrophy of the thyroid parenchyma after a serious illness, and analogous to the atrophy of the testicles after mumps. The third variety is due to the goitrous degeneration of the thyroid body, and the following shows how this form is rapidly disappearing from this country. Not fifty years ago a little hemmed-in valley in Somersetshire—mild, damp, dirty, and densely wooded with orchards—contained 540 inhabitants. In this number were included 4 goitrous idiots, 26 goitrous imbeciles, 5 goitrous deaf-mutes, and 200 or 300 goitrous villagers, with low intelligence and defective speech. The above creatures were stunted and thick-set, with large heads, abundant coarse hair, low foreheads, small sunken eyes, broad faces with flat noses, large mouths with thick lips, and rickety limbs, the expression laughing or pained or vacant, the gait waddling. They were mostly weak, mild and harmless, and, if mischievous, only so from irresponsible ignorance. Several green, stagnant pools existed in the place; the air was necessarily stagnant, and often reeking with rotten vegetation; young strangers became goitrous on settling there; intermarriage was unusually common, and many similar cases existed in an adjoining parish.

Dr. Hugh Norris, who made this observation nearly half a century ago, still lives in the same neighborhood, and reports that one solitary cretin now survives of about fifty years of age, the march of civilization having apparently stamped out the disease.

The occurrence of cancer at a much earlier age than we have been in the habit of expecting to find it, is now being only too frequently recorded. A case where it attacked the esophagus of a woman of twenty-five was recently shown at the Laryngological Society, and now a case has been published of scirrhus of the breast in a young woman of twenty-two.

From some very interesting articles in the *British Medical Journal*, by an Italian surgeon, it appears that the reports of "mutilation" of prisoners by Abyssinians are only too true. This "mutilation," when it concerned black troops in the service of Italy, took the form of cutting off the right hand and the left foot; when Italian soldiers fell into the hands of some of these savages they had their genital organs entirely removed. A number of these natives who underwent this mutilation of hand and foot survived, and 141 submitted to secondary amputation of these extremities in order to leave them a useful stump. Not one death followed these 141 amputations, which were executed at the base hospitals or at Massowah, and fully ninety per cent. of the cases healed rapidly by first intention. The ten per cent. which suppurated were generally the result of the impatience and restlessness of these black soldiers, who would not be satisfied unless they undid the bandages and examined the stumps for themselves. Such good results were no doubt due to the simple and effective way in which antisepsis was carried out. With the exception of the carbolic-acid lotion for the instruments, no other antiseptic was used but perchloride-of-mercury lotion of the strength of 1 in 1000. All instruments were boiled twice a day to make sure. All the perchloride gauze used, both for swabs and

dressings, was for further security boiled also. No other swabs were used but those made out of perchloride gauze, and these were touched only by the operating surgeon or his assistant. No other hand came in contact with them, either for preparing or handling them. All ligatures and sutures, exclusively of silk, were boiled freshly. The dressings consisted of iodoform dusting, covered by boiled perchloride gauze squeezed out by the operating surgeon himself, and put loosely and freely over the stump, and over this a thick layer of dry perchloride cotton wool and a gauze bandage. The anesthetic used was exclusively Merck's chloroform; and whether as a result of the quality of the drug, or the elevation (7000 feet over the level of the sea), or the race, patients have rarely taken chloroform better and easier.

Large numbers, of course, bled to death; and still more of those who suffered the more terrible form of mutilation. The amputated organs were skewered on spears, and —*horribile dictu*—were carried in triumph as trophies to be presented by the Abyssinians to their wives.

A very detailed account has been published of the case of a medical man who was attacked with acute septicemia, and recovered under treatment by antistreptococcus serum. That the latter was really the curative agent appears from the history of the case, which was a long one; for relapses occurred when treatment was discontinued too soon, and recovery set in after each renewal. A curious point is that there was no local manifestation of the place of entry of the poison. The doctor, however, had an abrasion on the right forefinger. He had attended a fatal case of puerperal septicemia just before he commenced to feel sick, and he frequently complained that "he could not get rid of the awful smell."

The same journal in which the above appears contains the record of a failure of the tetano-toxin. This is the more disappointing as the case developed in hospital, and the patient received the treatment as soon as possible. Instead of checking the disease, the injections seemed actually to increase the number of spasms. The patient was out at sea when the wound occurred through which infection must have taken place. It is difficult to understand how the tetanus bacillus reached him there.

The "orificial surgeon" has not yet evolved in our midst, and as I see that considerable fun is made of him on your side I cannot resist quoting an amusing paragraph on the type of individual from the witty pen of the editor of *The Practitioner*. He says:

"Give me a place to stand upon," said Archimedes, "and I will move the world." In medical practice some philosophers take their stand upon the stomach, others on the liver, others again on the nose. Now there has arisen—in America, it is hardly necessary to say—a school of seekers after truth who look for the cause of all diseases in the rectum. If, after persevering search, they fail to find it there, they seek for it in some other natural opening of the body. "Orificial surgery" has attained the dignity of a cult, and of course has a journal in which the miracles of its hierophants are recounted. The creed is simple enough. To your orificialist the beginning of therapeutic wisdom is to dilate the rectum. That portion of the human anatomy is, in fact, treated by these learned persons as the savage treats his fetich; it is punished whenever anything goes wrong in the economy. If dilatation fails, the rectum can be faradized, and as a last resource excised. Should the disease still prove refractory, the other orifices can be attacked one after the other. If there is anything left of the patient when orificial surgery has done with him, he is probably cured, or at any rate "order reigns" in his system as in a captured city after the inhabitants have been put to the sword. Let me, by way of example, give a brief account of one of the triumphs of the system, as reported some little time ago in the *Journal of Orificial Surgery*. The patient was a robust, blue-eyed, fair-haired Swedish girl, aged twenty-six, who suffered from a cough and various nervous troubles. The treatment was as follows: The patient had to take up her abode in the same house as the doctor, who then laid regular siege to the disease. He first poured in a hot fire of drugs; next he brought up his heavy artillery in the form of galvanization and faradization; then he tried to carry the place by storm by dilating the rectum. The enemy, however, was difficult to dislodge, and the siege was continued with galvanization of the solar plexus and both vagi, nasal sprays, and instillation of verbascum oil into the ears. Finally came a combined attack in force; the hymen was excised, there were further dilatations and faradization, and at last the doctor's skill and determination were rewarded with complete victory. There can hardly have been a nook left where a reflex irritation could hide itself. These advanced methods of treatment will hardly, I think, become acclimatized among us; they can flourish only in the ampler ether, the diviner air of the New World. The orificial surgeons are, I am quite willing to believe, honest enthusiasts, but what are we to think of the patients? The matter suggests some curious reflections. Our American cousins are—as we have frequent opportunities of learning from themselves—above all a "brainy" people, and their nervous machinery is possibly more complex and more delicate than ours. John Bull's coarser clay may, however, have in it certain compensations; at least it is something to be thankful for that he is not "brainy" enough to understand the subtle philosophy which teaches that the true source of a cough is to be found in the rectum.

PARIS LETTER.

By Arthur R. Turner, M.D. (Paris).

The former chef de clinique of Trousseau, Professor Peter, who died not long ago, was wont to say that no woman suffering from

any disease of the heart should, if unmarried, marry; if married, have children; and if with child, be allowed to go to full term.

In a clinical lecture delivered recently at the Pitié Hospital, Professor Jaccoud criticised this statement as too absolute. He thought that under some conditions a physician consulted as to the advisability of the marriage of a female patient might consent. In the first place, opposition to the wishes of the patient might in itself be most unfavorable. Then, too, it should be ascertained whether the cardiac lesion had already produced any such symptoms as dyspnea or hemoptysis. Even in this latter case it would be well not to be too severe when it was shown that such occurrences had been rapidly ameliorated by suitable treatment, and when the social position of the patient would allow a proper hygiene.

What, however, Professor Jaccoud especially recommends, is that the patient should be placed upon a partial milk diet from the second or third month of pregnancy, two liters of milk being taken daily. This tends to prevent not only the cardiac symptoms already mentioned, but also the presence of albumin in the urine.

Professor Jaccoud declares that he authorizes marriage in cases which have not previously shown any very serious symptoms, on condition that such a regime be followed during pregnancy.

Ever since the outbreak of the plague at Hong-Kong, Dr. Yersin, formerly of the Pasteur Institute in Paris, has been studying the disease in China, and experimenting with a serum manufactured by him. At a recent meeting of the Academy of Medicine, Dr. Monod reported, in Dr. Yersin's name, a case treated with great success. The patient was a young Chinaman of eighteen years who showed the first symptoms of the disease in the forenoon. At 3 in the afternoon a characteristic bubo was noted in the groin. At 5 a first injection of ten cubic centimeters of serum was made; a second at 6; and a third at 9 in the evening. Improvement began at midnight; the fever declined, and the bubo diminished in size. At 6 in the morning the bubo was no longer painful, and the fever had gone. Two days later the patient resumed his usual life.

At the same session of the Academy of Medicine a paper was presented by Messrs. Surmont and Delval, of Lille, on the Toxic Power of Gin, which is consumed in great quantities in northeastern France, on the Belgian frontier. When the bad reputation which gin has is considered, the results at which the essayists arrive are rather surprising. They state that gin is to a great degree protected against adulteration from the fact that it must be sold clear and colorless. It contains but very little fusel-oil, less than one per cent. in most cases. Almost all the alcohol contained in it is ethylic, and the harm which gin undoubtedly produces is due to the quantity taken, rather than to any special noxious qualities. In fact, it is much less harmful than many so-called naturally produced liquors.

French convicts wishing to avoid working for a few days have many ingenious methods of producing artificial diseases. One method used in some of the settlements is the following: The mucous membrane of the mouth is pricked with a sharp pin of a certain size. The nose and mouth are then tightly closed and efforts at expiration made until the cheek begins to swell. This method was too successful in one case, producing so much emphysema of the cellular tissue that the man died of suffocation before tracheotomy could be performed. Another method of obtaining relief from active service during some days consists in passing under the skin of the axilla or popliteal space a thread covered with dental tartar. The wound necessitates hospital treatment, and on recovery anchylosis of the joint or muscular retraction is frequently sufficiently serious to incapacitate the patient for the remainder of his life. An attack of jaundice is produced by smoking fifty grammes of tobacco which has been soaked in oil and dried.

During a few days spent at a seaside resort it has been possible for me to obtain some idea of the life of a country doctor in France. The nearest physician to the village where I was staying, about three miles away, would usually ask 2½ francs, or 50 cents, a visit. His office fee would be one franc, or 20 cents. One man with whom I had some conversation on the subject said that the peasants always sent for a medical man in the evening, in order to avoid leaving their work during the day.

TREATMENT OF SYPHILIS.

To the Editor of the THERAPEUTIC GAZETTE.

DEAR SIR:—Having read with very considerable interest Dr. Lindsay's communication on the treatment of syphilis, I shall feel obliged if you spare me space for a few re-

marks anent the statements therein contained. In a broad general way I agree with his method of treatment, once treatment has commenced; but as to his advice regarding the management of cases up to the time when secondaries appear—or, in his words, "when diagnosis is positive";—I venture to take strong exception. I may here mention that I have been for sixteen years connected with the Government Lock Hospital in Dublin (containing an average of seventy patients the year round), and therefore may presume to speak with some authority on the subject. During that time I had very ample opportunity of witnessing the deplorable results following delayed treatment, and from my experience I could not speak too strongly of the serious mischief caused by delay in the early treatment, whether through the fault of the patient or of the doctor, by, as Dr. Lindsay says, "waiting until secondaries appear." I will here give one instance of the vast difference between early and delayed treatment—an instance which occurred a good many years ago.

Two gentlemen consulted me. In age, health, and general circumstances, they were as nearly as possible alike. They contracted the disease from the same woman, on two consecutive nights. Number one consulted me the moment he noticed any sign of trouble, and I forthwith put him under special mercurial treatment. In due course (two months afterwards) he got a slight roseolar rash and slight sore throat, but both quickly vanished under treatment. No symptom of the disease remained after five months, and he has remained in perfect health up to the present date and is the father of a healthy family. Number two consulted me just as the secondary rash began to appear (say about six weeks after connection). He was covered with a profuse papular eruption and had all the concomitants of a severe dose of syphilis. Placed under a rigid course of treatment, it was nine months before he made a good recovery. I strongly advised him to continue under treatment for a further term of at least eighteen months, and not to marry until two years after final cessation of treatment. He continued his medicine for six months, and though during the ensuing year he got "reminders" he contracted marriage at the expiration of that year, with the result that his first child was still-born. He then resumed treatment, and two years afterward had a healthy child. Since then he has had no return of the disease.

This is a fair example (from among many), for the absolute accuracy of which I can vouch, of the results from early and delayed treatment.

I may here mention that one of our best authorities (to my mind, probably the best in Europe), Mr. Jonathan Hutchinson, of London, has stated that if treatment is commenced early after inoculation and continued regularly, no secondary rash will appear, and if treatment is continuously prolonged for a due length of time none of the sequelæ of syphilis will ensue. To my mind, a judicious course of mercury does no harm, whether the patient has syphilis or not. Indeed, from watching my own patients, I would say that constitutionally it serves them, and, given guardedly, is one of our best tonics. Therefore my opinion is that if the practitioner is in doubt he should at once put the patient under special treatment. As you know, the average practitioner is not competent to diagnose the initial lesion, and consequently it would be a deplorable mistake to allow the system to be permeated by the poison of syphilis for six weeks, especially as the treatment, if properly carried out, can do no harm, even in the event of the sore turning out to be a simple one. Of course it is desirable that the physician be able to diagnose the various natures of sore, but unfortunately he is not.

As to Dr. Lindsay's method of treatment when commenced, the time it should extend over, and the form of administering the various drugs, I generally agree with him. Space forbids me entering into a detailed examination of the pros and cons of the various methods of administering mercury, and I shall merely mention that with private patients I find it most reliable to give it internally. As to the precise salt to use, the matter does not seem one of vital importance, but in my own practice I use blue mass combined with quinine and opium. I should strongly object to the hypodermic administration of mercury, as there is no good to be obtained thereby, and much danger to be incurred. If it is required to get a patient quickly under the influence of mercury, this is readily done within twenty-four hours without risk by inunction.

Apologizing for trespassing at so much length on your space,

I am yours,

M. A. DONNELLY, F.R.C.S.,
Visiting Surgeon Westmorland Lock Hospital.
DUBLIN, IRELAND.